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CONCHOLOGIA ICONICA:

OR,

ILLUSTRATIONS

OF THE

SHELLS OF MOLLUSCOUS ANIMALS.

VOL. XVI.

87963

CONTAINING MONOGRAPHS OF THE GENERA

UNIO.	IRIDINA.	GALATEA.
PLEIODON.	HAMINEA.	AKERA.
BULLA.	HYDATINA.	DOLABELLA.
MYCETOPUS.	APLUSTRUM.	DOLABRIFERA.

BY

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"Thyself how wondrous then,
Unspeakable! who sitt'st above these heavens
To us invisible, or dimly seen
In these thy lowest works."

Milton.

LONDON:

L. REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1868.

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MONOGRAPH

OF THE GENUS

UNIO

"Thy food shall be
The fresh brook mussels."

Shakespeare.

1.

2.

3

4.

Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE I.

Genus UNIO, *Retz.*

Testa intus margaritacea, æquivalvis, sæpissimè inæquilateralis, epidermide conspicuâ semper induta; ligamentum externum; cardo variabilis, dentibus anticis vel centralibus in utráque valvulâ 1 2 instructus, sæpius etiam lamellis lateralibus vel posticis præterea munitus; impressiones musculares duæ, postica composita.

Shell pearly within, equivalve, almost always inequilateral, constantly clothed with a conspicuous epidermis; ligament external; hinge variable, furnished with one or two central or anterior teeth in each valve, and strengthened besides, for the most part, by lateral or posterior lamellæ; muscular scars two, the hinder one composite.

Somewhat more than a hundred years have elapsed since Linnæus first arranged shells in an artificial, yet simple, methodical, and easily comprehensible manner. Since that period, certain early-appreciated and natural genera (such as typical *Mya*) have not even tripled in the number of known species, whilst the *Uniones*, of which two or three only were distinguished by the Great Systematist, are now known to us by hundreds. Indeed, something like a thousand so-called species have already been described, and every year that indefatigable veteran, Isaac Lea (the loving patron of the *Naiades*), adds bewildering varieties, forms, or species (it is doubted which) to the conglomerated aggregate. It is more than probable that not one-half of the presumed species of our North American cousins will stand the crucial test of criticism; yet many of their really distinct forms have been here unavoidably omitted, from want of specimens for delineation. Scarcely any of the shell-collectors of England care for such sombre-hued objects; hence the omnivorous cabinets of Taylor, Hanley, and the British Museum, are almost our sole sources of study.

Independently of the remarkable diversity of outline in the male and female of each species (differences which, so far as we know, are comparatively imperceptible in most other genera), priority of nomenclature involves a never-ending investigation; for Conrad and Lea (both naturalists of eminent ability) for the most part claim precedence of each other on no common ground for arbitration; the former more usually from prior publication in print; the latter from prior readings at some scientific meeting. As to such brief and utterly inadequate diagnoses as formerly disgraced the Proceedings of the Zoological Society, and still appear in those of the Academy of Natural Sciences of Philadelphia, the few characters there specified would equally apply to a score of other shells. An ordinary *Unio*, devoid of any striking peculiarity of sculpture or of contour, cannot possibly be determined without the aid of a really good figure, or of a description so long and careful that few modern naturalists have the patience to elaborate it. Say's earlier species (those in the American edition of Nicholson's Cyclopædia) are so ill defined that even his own countrymen differ as to what shells he wished to indicate.

It is, perhaps, to be regretted that so extensive a genus as *Unio* was not subdivided in the present work, and the name restricted to such species only as are provided with lateral lamellæ, but the broad Lamarckian divisions, adopted in the earlier volumes of the 'Iconica,' compelled the author, despite of his gradually changed views of natural groups, to preserve the outlines, at least, of his original design. *Alasmodonta*, with its two primary and no lateral teeth, *Monocondylæa*, with merely one primary tooth and no lamellæ, are easily distinguishable from the typical *Uniones*. As to *Pseudodon*, with its single rudimentary compressed tubercle in each valve, it had, perhaps, better have been wholly relegated to *Anodon*. *Trigonodon* and *Plagiodon*, each based upon one shell only, are of less present importance.

The United States of North America now furnish the great bulk of the recorded species. South America, if ever investigated with equal energy, will probably yield us as many distinctive forms. Asia (China has, perhaps, to be excepted) seems comparatively poor, since British India, although its conchological fauna has been fairly worked out by such enthusiastic naturalists as Theobald, Benson, and the Blandfords, scarcely adds more than a score to our list. Europe, Africa, and Australasia (the two latter, possibly, from want of exploration) are alike sparingly provided with *Naiades*.

Species 1. (Mus. Cuming.)

UNIO BOYKINIANUS. *Un. testâ magis minusve crassâ, in medio ventricosâ, valde inæquilaterali, obovato-subtrigonâ, anticè perbrevi angustatâ et rotundatâ, posticè latâ depressâ et alatâ, olivaceo-nigrescente concolore, plicis multis obliquis subarcuatis aut flexuosis (et sæpe*

furcatis) undique ornatâ; margaritâ albido-cærulescente; dentibus cardinalibus in utrâque valvulâ 2, erectis, trigonis, laciniatis; lamellis lateralibus curvatis, elevatis.

BOYKIN'S UNIO. Shell more or less thick, ventricose in the middle, very inequilateral, subtriangularly obovate, in front very short narrowed and rounded, behind broad depressed and winged, of a uniform blackish-olive, everywhere adorned with numerous slanting subarcuated or flexuous (and often forked) folds; nacre bluish-white; primary teeth two in each valve, erect, triangular, jagged; lateral lamellæ curved and elevated.

LEA, Trans. Amer. Ph. Soc. ser. 2. vol. viii. (Obs. on Unio, vol. iii. p. 46), pl. 13. f. 22.

Hab. Chattachoochee River, Georgia, and Warrior River, Alabama, U. S.

The hinder dorsal area is broadly concave, and the hinge-margin is only broad where it serves as a base for the primary teeth. In the closely allied *keros* the folds near the ligament are small, narrow, and numerous.

Species 2. (Mus. Cuming.)

As the shell represented proves to be a dwarf form of *Unio fragosus*, of which a fine and characteristic example has been delineated in Plate VII. (Fig. 27), the reader is referred to the description there appended.

Species 3. (Mus. Cuming.)

UNIO SCHOOLCRAFTENSIS. *Un. testâ crassiusculâ, subventricosâ, subquadrato-rotundâ, vix inæquilaterali, anticè latè rotundatâ, posticè subbiangulatâ, nitidâ, flavâ, radio perviridi lato et brevi in medio supernè pictâ, tuberculis planulatis satisque magnis in medio infernè, aliisque minoribus in et supra costam umbonalem subangulatam (in exemplis adultis) sparsim ornatâ; umbonibus eminentibus; margaritâ albido-cæruleâ; margine cardinali dentibus trigonis verticalibus, lamellisque lateralibus validis et vix elongatis munito.*

SCHOOLCRAFT'S UNIO. Shell thickish, subventricose, squarish-orbicular, broadly rounded in front, subbiangular behind, of a shining bright yellow, painted above with a short broad central green ray, here and there adorned below (in full-grown specimens) with central tubercles which are flattened and rather large, and on or beyond the subangular umbonal ridge with other smaller ones; umboes projecting; nacre bluish-white; hinge-margin broad, strengthened with vertical triangular teeth, and strong, scarcely elongated, lateral lamellæ.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. v. p. 37 (Obs. on Unio, vol. i.), pl. 3. f. 9.

Hab. Fox River, Green Bay, N. America.

Species 4. (Mus. Cuming.)

UNIO VERRUCOSUS. *Un. testâ crassâ, depressiusculâ, in medio retusâ, oblongo-subquadratâ, valde inæquilaterali, posticè subbiangulatâ, olivaceâ concolore, ante costam umbonalem elevatam verrucis confertissimis undique sculptâ, et ultra eam plicis divergentibus subarcuatis obliquè ornatâ; margine ventrali anticè acclivi, posticè retuso; natibus parvis, obliquis, vixque prominulis; margaritâ albo-argenteâ; margine cardinali lato; dentibus cardinalibus erectis, subtrigonis, laciniatis; lamellis lateralibus longis rectis, declivibus.*

THE WARTY UNIO. Shell thick, rather depressed, indented in the middle, squarish-oblong, very inequilateral, subbiangular behind, of a uniform olive-green, before the raised umbonal ridge everywhere embossed with most crowded warts, and beyond it slantingly adorned with somewhat curved divergent folds; ventral edge rising in front, indented behind; beaks small, slanting, scarcely projecting; nacre silvery white; hinge-margin broad; primary teeth erect, subtriangular, jagged; lateral lamellæ long, straight, oblique.

RAFINESQUE, Mon. Coq. de la Riv. Ohio, Ann. Gen. Sc. Phys. Brux. 1820, vol. v. pl. 81. f. 10–12.

Unio tuberculatus, Barnes.

Theliderma pustulata, Swainson.

Hab. River Ohio, N. America.

The coloured epidermis is so thin that the crowded tubercles (which are elongated and almost perpendicular near the ridge) often become whitish from abrasion. There are two sets of folds; those upon the narrow concave space adjacent to the ligament are much the smaller.

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Sowerby.del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE II.

Species 5. (Mus. Cuming.)

UNIO PLICATUS. *Un. testâ subquadrato-ovatâ, posticè compressâ et declivi-truncatâ, umbonibus prominentibus, amplis, tumidis, obliquè perampliter plicatis, plicis sinuosis, prope ad marginem ventralem obliquè descendentibus; epidermide fulvo-nigrâ.*

THE PLAITED UNIO. Shell somewhat squarely ovate, posteriorly compressed, and slopingly truncated, umboes prominent, large, swollen, obliquely very largely plaited, plaits sinuous, descending obliquely nearly to the ventral margin; epidermis fulvous-black.

SAY, Amer. Conch. pl. 1. f. 8.

Unio Peruviana, Lamarck.

Unio rariplicata, Lamarck.

Unio Dombeyana, Valenciennes.

Hab. North America.

Characterized by the swollen prominence of the umboes, and boldness of the oblique sinuous plaits.

Species 6. (Mus. Cuming.)

UNIO KLEINIANUS. *Un. testâ obtusè trigonâ, compressiusculâ, posticè declivi-truncatâ, undique nitidè divaricatim lirato-plicatâ, plicis parvis, numerosis, interstitiis concentricè tenuisulcatis et striatis; epidermide fulvo-olivaceâ.*

KLEIN'S UNIO. Shell obtusely triangular, rather compressed, posteriorly slopingly truncated, neatly divaricately ridge-plaited throughout, plaits small, numerous, interstices concentrically finely grooved and striated; epidermis fulvous-olive.

LEA, Trans. Amer. Phil. Soc. Second Series, vol. 10. pl. 17. f. 18; Obs. vol. 5. p. 21.

Hab. Suwanee River, Florida, North America.

When Mr. Lea, in 1852, described this pretty species, he remarked that the beaks of the only two specimens then known to him were much eroded, and that he should suppose "that, in perfect or young specimens the folds would extend to the apex, and present a fine appearance." Mr. Cuming's specimen, here figured, has much of the character Mr. Lea anticipated.

Species 7. (Mus. Cuming.)

UNIO CÆLATUS. *Un. testâ latè securiformi, compressâ, medio concavo-contractâ, lævigatâ, versus margines posticum et ventralem radiatim verrucoso-rugatâ; epidermide nigricante-viridi, luteo tinctâ et variegatâ.*

THE CARVED UNIO. Shell broadly wedge-shaped, compressed, concavely contracted in the middle, smooth, radiately wart-wrinkled towards the posterior and ventral margins; epidermis dark green, stained and variegated with yellow.

CONRAD, Freshw. Shells, p. 29. f. 3, 4.

Hab. North America.

A prettily-coloured wedge-shaped shell, compressly contracted in the middle, smooth throughout, except at the posterior and ventral margins, where sculpture is developed in strong wart-wrinkles.

Species 8. (Mus. Cuming.)

UNIO HEROS. *Un. testâ subquadrato-ovatâ, posticè latè expansâ, subflabelliformi, circa umbones crispato-verrucosâ, deinde obliquè perampliter plicatâ, plicis sinuosis, superioribus minoribus, versus marginem dorsalem radiantibus; epidermide fusco-nigrâ.*

THE HERO UNIO. Shell somewhat squarely ovate, posteriorly broadly expanded, rather fan-shaped, crisply verrucose around the umboes, then obliquely very largely plaited, plaits sinuous, upper smaller, radiating towards the dorsal margin; epidermis fuscous-black.

SAY, 'Disseminator,' Lea, Synops. p. 20.

Unio multiplicatus, Lea.

Hab. North America.

Mr. Lea claims the adoption of his name of *U. multiplicatus* for this species on the grounds that Mr. Say, after having described it in the 'Disseminator' with the name of *U. heros*, abandoned the species in his 'American Conchology' as being a variety of *U. undulatus*. If Mr. Lea considered Mr. Say's original view to be the right one, he should have reinstated the original name.

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Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE III.

Species 9. (Fig. 9, and 12, Mus. Cuming.)

UNIO TUBERCULATUS. *Un. testâ orbiculari, compressiusculâ, posticè flexuoso-truncatâ, medio et latere postico de umbonibus ad margines rudè irregulariter verrucosis; epidermide fulvo-olivaceâ.*

THE TUBERCLED UNIO. Shell orbicular, rather compressed, posteriorly flexuously truncated, middle and posterior side irregularly rudely warted from the umboes to the margins; epidermis fulvous-olive.

RAFINESQUE, Mon. Coq. de la riv. Ohio, Ann. Gen. Sc. Phys. Brux. 1820, vol. 5. p. 287.

Unio verrucosus, Barnes.

Unio tuberculosus, Valenciennes.

Hab. North America.

The wart tubercles in this species are peculiarly rudely developed, and the compressed flexuous truncation of the posterior side of the shell is also a specific character.

Species 10. (Mus. Cuming.)

UNIO TURGIDUS. *Un. testâ subquadrato-rotundatâ, posticè flexuosâ, declivi-truncatâ, medio subcontractâ, medio et circa umbones concentricè nodoso-tuberculatâ; epidermide nigricante-olivaceâ.*

THE SWOLLEN UNIO. Shell somewhat squarely rotundate, posteriorly flexuous, and slopingly truncated, rather contracted in the middle, concentrically nodosely tubercled in the middle and around the umboes; epidermis blackish-olive.

LEA, Trans. Amer. Phil. Soc. 1834, vol. 6. pl. 5. f. 11. Obs. vol. 2. p. 11.

Unio Mortoni, Conrad.

Hab. New Orleans, North America.

Rather flexuously contracted on the posterior side, the sculpture being in the form of concentrically inclined nodules.

— —

Species 11. (Mus. Cuming.)

UNIO APICULATUS. *Un. testâ subquadrato-ovatâ, posticè flexuoso-angulatâ, deinde declivi-truncatâ, medio concavo-contractâ, undique nitidè rugoso-nodulatâ; epidermide fulvo-olivaceâ.*

THE BEE-COVERED UNIO. Shell somewhat squarely ovate, posteriorly flexuously angled, then slopingly truncated, concavely contracted in the middle, neatly rugosely noduled throughout; epidermis fulvous-olive.

SAY, Amer. Conch. pl. 52.

Hab. North America.

Resembling the preceding species in form, but more quadrately flexuous, and beautifully sculptured throughout.

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Sowerby, del et lith.

Vincent Brooks, Imp.

UNIO.

PLATE IV.

Species 13. (Mus. Cuming.)

UNIO ATROCOSTATUS. *Un. testâ ovatâ, obliquè subfabelliformi, circa umbones irregulariter crispato-rugatâ, deinde obliquè ampliter plicato-costatâ; epidermide nigrâ.*

THE BLACK-RIBBED UNIO. Shell ovate, obliquely somewhat fan-shaped, irregularly crispately wrinkled around the umboes, then obliquely largely plicately ribbed; epidermis black.

LEA, Trans. Amer. Phil. Soc. Second Series, vol. 10. pl. 2. f. 5; Obs. vol. 4. p. 44.

Hab. Alabama, North America.

There is very little in this species, beyond the fact of its being of a less oblong-square form, to distinguish it from *U. heros*.

Species 14. (Mus. Cuming.)

UNIO SPARSUS. *Un. testâ suborbiculari-ovatâ, depressâ, posticè obtusè angulatâ et flexuoso-compressâ, lævisculâ; obsoletè sparsim verrucosâ, posticè subverrucosâ; epidermide fulvo-olivaceâ.*

THE SPRINKLED UNIO. Shell somewhat orbicularly ovate, depressed, posteriorly obtusely-angled, and flexuously compressed, rather smooth, obsoletely sparingly warted, posteriorly rather warted; epidermis fulvous-olive.

LEA, Trans. Amer. Phil. Soc. Second Series, vol. 8. pl. 25. f. 58; Obs. vol. 3. p. 82.

Hab. East Tennessee, North America.

Very similar in form to *U. tuberculatus*, and not much unlike the young of that species.

Species 15. (Mus. Cuming.)

UNIO PHILLIPSII. *Un. testâ oblongo-quadratâ, medio subcontractâ, posticè perampliter expansâ, biangulatâ, ad angulos et versus marginem promiscuè tumido-tuberculatâ; epidermide virescente, olivaceo radiatim fasciatâ et lineatâ.*

PHILLIPS' UNIO. Shell oblong-square, rather contracted in the middle, posteriorly very largely expanded, two-angled, promiscuously tumidly tubercled at the angles and towards the margin; epidermis greenish, radiately banded and lineated with olive.

CONRAD, Monog. p. 9. pl. 5. f. 1.

Hab. North America.

Characterized by an unusual expansion of the posterior side, which is bi-angled, and rudely tumidly tubercled on the angles.

Species 16. (Mus. Cuming.)

UNIO COSTATUS. *Un. testâ oblongo-ovatâ, posticè subquadrato-productâ, medio obliquè sinuosè plicato-costatâ, costis versus marginem posticum corrugato-radiantibus; epidermide fulvo-olivaceâ.*

THE RIBBED UNIO. Shell oblong-ovate, posteriorly rather squarely produced, obliquely sinuously plicately ribbed in the middle, ribs corrugately radiating towards the posterior margin; epidermis fulvous-olive.

RAFINESQUE, Mon. Coq. de la riv. Ohio, Ann. Gen. Sc. Phys. Brux. 1820, vol. 5. p. 287.

Unio undulatus, Barnes.

Hab. North America.

This species appears to differ from its congeners in not being crispately warted about the umboes.

August, 1864.

17.

18.

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Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE V.

Species 17. (Mus. Cuming.)

UNIO TRAPEZOIDES. *Un. testâ oblongo-trapezoideâ, posticè conspicuè tumido-angulatâ, deinde declivi-truncatâ, umbonibus compressis, circa umbones subobsoletè crispato-verrucosâ, perobliquè breviter plicato-costatâ; epidermide nigrâ.*

THE TRAPEZOID UNIO. Shell oblong-trapezoid, posteriorly conspicuously tumidly angled, then slopingly truncated, umboes compressed, around the umboes rather obsoletely crispately warted, very obliquely shortly plicately ribbed; epidermis black.

LEA, Trans. Amer. Phil. Soc. vol. iv. pl. 3; Obs. vol. i. p. 79.

Unio interruptus, Say.

Hab. Lake St. Joseph, Louisiana, North America.

Of a particularly characteristic trapezoid form, but partaking, nevertheless, of the sculpture of *U. heros* and its congeners.

Species 18. (Mus. Cuming.)

UNIO ASPER. *Un. testâ subquadrato-globosâ, medio concavo-contractâ, posticè obtusè angulatâ et declivi-truncatâ, biradiatim nodoso-tuberculatâ, prope marginem posticum radiatim rugatâ; epidermide fulvo-olivaceâ.*

THE ROUGH UNIO. Shell somewhat squarely globose, concavely contracted in the middle, posteriorly obtusely angled and slopingly truncated, biradiately nodosely tubercled, radiately wrinkled near the posterior margin; epidermis fulvous-olive.

LEA, Trans. Amer. Phil. Soc. vol. iv. pl. 9. f. 15; Obs. vol. i. p. 95.

Hab. Alabama, North America.

Besides the two conspicuous rays of tubercles noted in the foregoing description, there are indications of pustules which in some specimens may probably be more developed.

Species 19. (Mus. Cuming.)

UNIO CAPERATUS. *Un. testâ oblongo-securiformi, anticè brevissimâ, posticè compressè productâ, concentricè irregulariter caperatâ, medio obsoletè radiatim nodulatâ fulvo-olivaceâ, intensè viridi; radiatim undulato-linealâ.*

THE WRINKLED UNIO. Shell ovately-oblong wedge-shaped, anteriorly very short, posteriorly compressly produced, concentrically irregularly wrinkled, obsoletely radiately noduled in the middle, fulvous-olive, radiately undulately lineated with dark-green.

LEA, Trans. Amer. Phil. Soc. Second Series, vol. x. pl. 5. f. 14; Obs. vol. iv. p. 49.

Hab. Tennessee, North America.

Extremely inequilateral, the shell being as short on the anterior side as in *Donax*.

Species 20. (Mus. Cuming.)

UNIO ELLIOTTII. *Un. testâ suborbiculari, posticè sublatè expansâ, obliquè perampliter costatâ, posticè radiatim costatâ, umbonibus parviusculis; epidermide nigrâ.*

ELLIOTT'S UNIO. Shell nearly orbicular, posteriorly rather broadly expanded, obliquely very largely ribbed, posteriorly radiately ribbed, umboes rather small; epidermis black.

LEA, Pro. Acad. Nat. Sci. Philadelphia, 1856, p. 262; Journ. Second Series, vol. iv. pl. 7; Obs. vol. vi. p. 54.

Hab. Othcalooga Creek, Gordon County, Georgia, North America.

A fine, bold species of the *U. heros* type, nearly orbicular in form, though rather broadly expanded on the posterior side.

21.

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Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE VI.

Species 21. (Mus. Cuming.)

UNIO FORSHEYI. *Un. testâ subquadrato-orbiculari, posticè subobscurè biangulatâ, deinde compressè productâ, undique copiosè nodoso-tuberculatâ; fulvo-olivaceâ.*

FORSHEY'S UNIO. Shell somewhat squarely orbicular, posteriorly rather obscurely two-angled, then compressly produced, copiously nodosely tubercled throughout; fulvous-olive.

LEA, Journ. Acad. Nat. Sci. Philad. Second Series, vol. iv. pl. 60. f. 182; Obs. vol. viii. p. 39.

Hab. Texas and Alabama, North America.

An extremely pretty species, doubly angled and flexuously compressed on the posterior surface, and studded throughout with neat, nodose tubercles.

Species 22. (Mus. Cuming.)

UNIO FLEXUOSUS. *Un. testâ ovatâ vel quadrato-ovatâ, læviusculâ, medio et posticè latè rudè costatâ, costis ad extremitates interdum productis et lobatis; fulvo-olivaceâ vel brunneâ, viridi interdum radiatim lineatâ.*

THE FLEXUOUS UNIO. Shell ovate or squarely-ovate, rather smooth, broadly rudely ribbed in the middle and posteriorly, ribs sometimes lobed at the extremities, sometimes produced and lobed; fulvous-olive or brown, sometimes radiately lineated with green.

RAFINESQUE, Mon. Coq. de la riv. Ohio, Ann. Gen. Sc. Phys. Brux. 1820, vol. v. p. 287.
Unio foliatus, Hildreth.

Hab. North America.

The more flexuous form of this species is the curious lobed variety of which we give a representation at Plate XIII. Fig. 53. According to recent observations it is said to be the male of the species, the form here figured being the female.

Species 23. (Mus. Cuming.)

UNIO REFLEXUS. *Un. testâ subtrigono-ovatâ, posticè obscurè flexuoso-angulatâ, læviusculâ, medio radiatim tuberculatâ, tuberculis distantibus, compressis, quasi cornutis, areâ ligamenti rugatâ; fulvo-olivaceâ.*

THE REFLECTED UNIO. Shell somewhat triangularly ovate, posteriorly obscurely flexuously angled, rather smooth, radiately tubercled in the middle, tubercles distant, compressed, as if horned, ligamentary area wrinkled; fulvous-olive.

RAFINESQUE, Mon. Coq. de la riv. Ohio, Ann. Gen. Sc. Phys. Brux. 1820, vol. v. p. 287.
Unio cornutus, Barnes.

Hab. North America.

The tubercles have a peculiar pinched growth, the interstices between them being hollowed.

Species 24. (Mus. Cuming.)

UNIO QUADRATUS. *Un. testâ suborbiculari-ovatâ, posticè obscurè biangulatâ et compressè flexuosâ, radiatim verrucoso-tuberculatâ, tuberculis promiscuis, hic illic distantibus; virescente-olivaceâ.*

THE SQUARE UNIO. Shell somewhat orbicularly ovate, posteriorly obscurely biangled and compressly flexuous, radiately verrucosely tubercled, tubercles promiscuous, here and there distant; greenish-olive.

RAFINESQUE, Mon. Coq. de la riv. Ohio, Ann. Gen. Sc. Phys. Brux. 1820, vol. v. p. 287.
Unio quadrulus, Say.
Unio asperrimus, Lea.

Hab. Ohio river, North America.

A fine, posteriorly flexuous species, in which the radiating warts are curiously promiscuous in their development.

25.

26.a.

26.b

27.

Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE VII.

Species 25. (Mus. Cuming)

UNIO METANEVER. *Un. testâ subquadrato-orbiculari, gibbosiusculâ, posticè flexuoso-angulatâ, deinde compressè truncatâ, undique irregulariter nodoso-tuberculatâ et verrucosâ; fulvo-olivaceâ, viridi variegatâ.*

THE SETTLER UNIO. Shell somewhat squarely-orbicular, rather gibbous, posteriorly flexuously angled, then compressly truncated, irregularly nodosely tubercled and warted throughout; fulvous-olive, variegated with green.

RAFINESQUE, Mon. Coq. de la riv. Ohio, Ann. Gen. Sc. Phys. Brux. 1820, vol. v. p. 287.

Unio nodosus, Barnes.

Unio rugosus, Barnes.

Telederma metanevra, Swainson.

Hab. North America.

There is a characteristic irregularity about the sculpture of this species.

Species 26. (Fig. *a*, *b*, Mus. Cuming.)

UNIO PRASINUS. *Un. testâ ovatâ, regulariter convexâ, posticè obtusè angulari, deinde compressè truncatâ, lævigatâ, in medio et versus angulum obtusè verrucosâ, posticè radiatim rugatâ; fulvo-olivaceâ, ad umbones viridi radiatâ.*

THE LEEK-GREEN UNIO. Shell ovate, regularly convex, posteriorly obtusely angular, then compressly truncated, smooth, obtusely warted in the middle and towards the angle, posteriorly radiately wrinkled; fulvous-olive, rayed with green at the umboes.

CONRAD.

Hab. North America.

Mr. Lea quotes this species as being a variety of *U. Schoolcraftensis*. The two specimens here figured, received by Mr. Cuming from a very good authority on the subject, Mr. Anthony, lead me to think that it must be distinct. There is a resemblance in colour and radiation, but an important difference in form, and in the character of the sculpture.

Species 27. (Mus. Cuming.)

UNIO FRAGOSUS. *Un. testâ suborbiculari, gibbosiusculâ, posticè obtusè angulatâ, deinde compressè expansâ, umbonibus subprominulis, undique promiscuè tuberculato-verrucosâ, posticè radiatâ; fulvo-olivaceâ, viridi tinctâ.*

THE ROUGH UNIO. Shell somewhat orbicular, rather gibbous, posteriorly obtusely angled, then compressly expanded, umboes rather prominent, promiscuously tubercularly warted throughout, posteriorly rayed; fulvous-olive, tinged with green.

CONRAD, Monog. pl. 6. f. 2.

Hab. North America.

Of an orbicularly expanded form, sculptured in a peculiarly bold and promiscuous manner.

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Sowerby, del. et. lith.

Vincent Brooks, Imp.

UNIO.

PLATE VIII.

Species 28. (Mus. Cuming.)

UNIO CYPHIUS. *Un. testâ obliquè ovatâ, anticè brevi, posticè compressâ, subattenuatâ, concentricè rudè rugatâ, in medio radiatim obtusè tuberculatâ, pallidè fulvo-olivaceâ.*

THE VAULTED UNIO. Shell obliquely-ovate, anteriorly short, posteriorly compressed and somewhat attenuated, concentrically rudely wrinkled, in the middle radiately obtusely tubercled; pale fulvous-olive.

RAFINESQUE, Mon. Coq. de la riv. Ohio, Ann. Gen. Sc. Phys. Brux. 1820, vol. v. p. 287.

Unio Æsopus, Green.

Hab. North America.

An oblique, rudely-sculptured shell, generally of a peculiar pallid-olive colour.

Species 29. (Mus. Cuming.)

UNIO DROMAS. *Un. testâ obliquè subpyriformi, anticè brevissimâ, posticè curvatâ, concentricè rugatâ, in medio radiatim obsoletè nodulatâ; fulvo-olivaceâ, viridi radiatim variegatâ.*

THE DROMEDARY UNIO. Shell obliquely somewhat pear-shaped, anteriorly very short, posteriorly curved, concentrically wrinkled, in the middle radiately obsoletely noduled; fulvous-olive, radiately variegated with green.

LEA, Trans. Amer. Phil. Soc. vol. v. pl. 10. f. 29; Obs. vol. 1. p. 182.

Hab. Tennessee, North America.

Of a characteristic obliquely-curved growth, the umboes standing out like two humps.

Species 30. (Mus. Cuming.)

UNIO STRIATUS. *Un. testâ obliquè suborbiculari, posticè rotundato-productâ, concentricè irregulariter nodoso-tuberculatâ; olivaceo-brunneâ.*

THE STRIATED UNIO. Shell obliquely suborbicular, posteriorly rotundately produced, concentrically irregularly nodosely tubercled; olive-brown.

RAFINESQUE, Mon. Coq. de la riv. Ohio, Ann. Gen. Sc. Phys. Brux. 1820, vol. v. p. 287.

Unio Cooperianus, Lea.

Hab. North America.

Copiously marked with concentric striæ of growth, and with irregular pinched-like tubercles.

Species 31. (Mus. Cuming.)

UNIO CICATRICOSUS. *Un. testâ elongato-cordatâ, anticè brevissimâ, posticè valde productâ, concentricè rugatâ, medio sparsim obtusè verrucosâ; fulvo-brunneâ.*

THE CICATRICED UNIO. Shell elongately-cordate, anteriorly very short, posteriorly very much produced, concentrically wrinkled, in the middle sparingly obtusely warted; fulvous-brown.

SAY.

Unio varicosus, Lea.

Hab. North America.

The normal form of this species will be found at Plate XIII. Fig. 40. Its extremest variation of growth is represented in the characteristic specimen here figured, in which the umboes are prominently terminal and beaked, and its posterior side very much produced.

August, 1864.

87963

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Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE IX.

Species 32. (Mus. Cuming.)

UNIO NODULOSUS. *Un. testâ elongato-ovatâ, anticè brevissimâ, posticè compressè alatâ, ad umbones et ad aream posticam rudè corrugatâ, in medio promiscuè verrucoso-nodulosâ; olivaceo-nigrâ, sericeâ.*

THE KNOTTED UNIO. Shell elongately ovate, anteriorly very short, posteriorly compressly winged, at the umboes and on the posterior area rudely wrinkled, in the middle promiscuously wart-noduled; olive-black, silky.

Mya nodulosa, Wood, Gen. Conch. p. 106. pl. 22. f. 1 to 4; Ind. Test. pl. 2. f. 29.

Unio nodulosus, Lea.

Hab. China.

A beautiful silky-coated species, of a remarkably produced wing-like form, distinct from any American type of the genus.

Species 33. (Mus. Cuming.)

UNIO LACHRYMOSUS. *Un. testâ quadrato-ovatâ, subtrapezoideâ, in medio concavo-impressâ, lævigatâ, deinde acutè angulatâ, posticè compressè truncatâ, lateribus ambobus copiosè minutè tuberculatis; lutescente, cæruleo-viridi tinctâ et variegatâ.*

THE LACHRYMOSE UNIO. Shell squarely ovate, somewhat trapezoid, in the middle concavely impressed, smooth, then sharply angled, posteriorly compressly truncated, both sides copiously minutely tubercled; yellowish, stained and variegated with blue-green.

LEA, Trans. Amer. Phil. Soc. vol. iii. pl. 6. f. 8; Obs. vol. i. p. 14.

Hab. North America.

Of a characteristic trapezoid form, brightly coloured, and very neatly profusely sculptured with small tubercles dropping like tears.

Species 34. (Mus. Cuming.)

UNIO GRANIFERUS. *Un. testâ subrotundâ, posticè modicè compressè truncatâ, medio et posticè tuberculato-nodulosâ, nodulis sparsis; virescente-olivaceâ, intus cupreo-purpurascente.*

THE GRAINED UNIO. Shell nearly round, posteriorly moderately compressly truncated, in the middle and on the posterior side, tubercularly noduled, nodules scattered; greenish-olive, interior coppery-purple.

LEA, Trans. Amer. Phil. Soc. vol. vi. pl. 19. f. 3, 4; Obs. vol. ii. p. 69. pl. 19. f. 60.

Hab. Ohio River, North America.

The tubercular nodules of this species are peculiarly scattered, and always absent from the anterior side of the shell.

Species 35. (Mus. Cuming.)

UNIO PERPLICATUS. *Un. testâ subtrigono-ovatâ, posticè expansâ, supernè subalatâ, obliquè rudè corrugato-plicatâ, plicis ad latus posticum radiantibus; intensè olivaceo-nigrâ.*

THE MUCH-PLAITED UNIO. Shell somewhat triangularly ovate, posteriorly expanded, slightly winged at the upper part, obliquely rudely wrinkle-plaited, plaits on the posterior side radiating; dark olive-black.

CONRAD, Anthony, MS. in Mus. Cuming.

Hab. North America.

There appears in this species an indication to become winged in the upper posterior part.

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UNIO.

PLATE X.

Species 36. (Mus. Cuming.)

UNIO SEMIGRANOSUS. *Un. testâ trigono-ovatâ, subæquilaterali, concentricè rudè plicatâ, undique densè verrucoso-granatâ, granis ad latus anticum evanidis; sordidè olivaceâ, intus cupreo-purpureâ.*

THE HALF-GRAINED UNIO. Shell triangularly ovate, nearly equilateral, concentrically rudely plicated, closely wart-grained throughout, grains fading away on the anterior side; dull olive, interior coppery-purple.

PHILIPPI, Mag. de Zool. 1843, p. 118.

Hab. Mexico.

This, and the species given at Fig. 37 and 39, represent a characteristic granulated type of the genus peculiar to Mexico.

Species 37. (Mus. Cuming.)

UNIO PLICIFERUS. *Un. testâ subelongato-ovatâ, ventricosissimâ, posticè declivi-acuminatâ, copiosè verrucoso-granatâ, granis ad aream posticam in plicis radiantibus; olivaceo-nigrâ, intus cupreo-purpureâ.*

THE PLAITED UNIO. Shell somewhat elongately ovate, very ventricose, posteriorly slopingly acuminated, copiously wart-grained, grains on the posterior area in radiating folds; olive-black, interior coppery-purple.

TEA, Trans. Amer. Phil. Soc. 1836; Obs. vol. ii. p. 61. pl. 17. f. 53.

Hab. Mexico.

Characterized by the same granular sculpture as the preceding species, the grains on the posterior area ranging in radiating folds; the shell is of peculiarly ventricose growth.

Species 38. (Mus. Cuming.)

UNIO DORFEUILLIANUS. *Un. testâ subquadrato-rotundâ, gibbosâ, posticè flexuoso-angulatâ, truncatâ, sparsim tuberculatâ, tuberculis interdum vix nullis; intensè olivaceâ.*

DORFEUILLE'S UNIO. Shell somewhat squarely rounded, gibbous, posteriorly flexuously angled, and truncated, sparingly tubercled, sometimes scarcely any; dark olive.

LEA, Trans. Amer. Phil. Soc. 1836; Obs. vol. ii. p. 73. pl. 17. f. 54.

Hab. Ohio River, North America.

A moderately tubercled shell, rudely flexuously truncated on the posterior side.

Species 39. (Mus. Cuming.)

UNIO CORIUM. *Un. testâ subquadrato-oblongâ, depressiusculâ, posticè flexuosè obtusè angulatâ, truncatâ, concentricè subrudè plicatâ, circa umbones densè verrucoso-granatâ; sordidè olivaceâ, intus pallidè rosaceo-purpurascente.*

THE SHAGREEN UNIO. Shell somewhat squarely oblong, rather depressed, posteriorly flexuously obtusely angled and truncated, concentrically rather rudely plicated, around the umboes closely wart-grained; dull olive, interior pale rose-purple.

Hab. Chiapa, Mexico.

The form of this shell is too widely distinct from that which we have figured as Mr. Lea's *U. pliciferus*, to allow of it being regarded as the same species, but it is impossible to foresee whether they might not be connected by an extended series of specimens.

August, 1864.

40.

41.a.

41.b.

42.

Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XI.

Species 40. (Mus. Cuming.)

UNIO HIPPOPÆUS. *Un. testâ oblongo-ovatâ, gibbosiusculâ, anticè brevissimâ, posticè obtusè angulatâ, obsoletè rudè plicatâ; castaneo-brunneâ.*

THE HORSE-FOOT UNIO. Shell oblong-ovate, rather gibbous, anteriorly very short, posteriorly obtusely angled, obsoletely rudely plicated; chestnut-brown.

LEA, Trans. Amer. Phil. Soc., Second Series, vol. x. pl. 1. f. 1; Obs. vol. iv. p. 41.

Hab. Lake Erie, North America.

Of a peculiarly gibbose oblong-ovate form, largely obliquely plaited, but the plaits are almost obsolete.

Species 41. (Fig. *a*, *b*, Mus. Cuming.)

UNIO GIBBOSUS. *Un. testâ suboblongo-ovatâ, plus minus cuneiformi, anticè brevissimâ, posticè declivi-acuminatâ, vel compressè expansâ, biradiatim rudè tuberculatâ; olivaceo-luteâ, viridi nitidè lineari-radiatâ.*

THE GIBBOUS UNIO. Shell somewhat oblong-ovate, more or less wedge-shaped, anteriorly very short, posteriorly slopingly acuminated, or compressly expanded, biradiately rudely tubercled; olive-yellow, neatly linearly rayed with green.

RAFINESQUE, Mon. Coq. de la riv. Ohio, Ann. Gen. Sc. Phys. Brux. 1820, vol. v. p. 287.

Unio perplexus, Lea.

Hab. North America.

The two forms of this species here figured show how materially the shell varies in its posterior growth.

Species 42. (Mus. Cuming.)

UNIO PERLENSIS. *Un. testâ suboblongo-ovatâ, crassâ, gibbosissimâ, posticè arcuato-truncatâ, obliquè perampliter plicatâ, plicis versus marginem plus minus obsoletis; intensè olivaceo-nigrâ.*

THE SOLID UNIO. Shell somewhat oblong-ovate, thick, very gibbous, posteriorly arcuately truncated, obliquely very largely plicated, plaits more or less obsolete towards the margin; dark olive-black.

CONRAD, Anthony, MS. in Mus. Cuming.

Hab. North America.

Remarkable for its short, very gibbous growth.

43.

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Sowerby, del. et lith.

Vincent Brooks Imp.

UNIO.

PLATE XII.

Species 43. (Mus. Cuming.)

UNIO BULLATUS. *Un. testâ subcordato-orbiculari, posticè quadrato-truncatâ, promiscuè tumido-verrucosâ, verrucis ad latus posticum plicato-radiantibus; olivaceo-brunneâ.*

THE BUBBLED UNIO. Shell somewhat cordately orbicular, posteriorly squarely truncated, promiscuously tumidly warted, warts plicately radiating on the posterior side; olive brown.

RAFINESQUE, Mon. Coq. de la riv. Ohio, Ann. Gen. Sc. Phys. Brux. 1820, vol. v. p. 287.

Unio pustulosus, Lea.

Hab. North America.

A subrotund shell, rather prominent at the umboes, squarely truncated on the posterior side.

Species 44. (Mus. Cuming.)

UNIO IRROBATUS. *Un. testâ subtrigono-cordatâ, posticè arcuato-declivi, concentricè varicoso-liratâ, liris modicè nodulatis; lutescente-olivaceâ, punctis viridibus copiosè radiatâ.*

THE BEDEWED UNIO. Shell somewhat triangularly cordate posteriorly arcuately sloping, concentrically varicosely ridged, ridges moderately noduled; yellowish-olive, copiously rayed with green dots.

LEA, Trans. Amer. Phil. Soc. 1827; Obs. vol. i. p. 11. pl. 5. f. 5.

Hab. North America.

It appears to be a character in this species that the radiating bands of green are composed of numerous small dots.

Species 45. (Mus. Cuming.)

UNIO STEGARIUS. *Un. testâ suborbiculari, depressiusculâ, medio modicè concavo-flexuosâ, posticè subtruncatâ, concentricè varicoso-liratâ, profusè irregulariter verrucosâ; lutescente-olivaceâ, punctis viridibus copiosè radiatâ.*

THE BEDECKED UNIO. Shell nearly orbicular, rather depressed, moderately concavely flexuous in the middle, posteriorly slightly truncated, concentrically varicosely ridged, profusely irregularly warted; yellowish-olive, copiously rayed with green dots.

RAFINESQUE, Mon. Coq. de la riv. Ohio, Ann. Gen. Sc. Phys. Brux. 1820, vol. v. p. 287.

Hab. North America.

Very like the preceding species in details of character, but of quite a different form.

Species 46. (Mus. Cuming.)

UNIO PERNODOSUS. *Un. testâ subquadrato-ovatâ, posticè declivi-expansâ, deinde truncatâ, tumido-verrucatâ, verrucis ad aream posticam plicato-radiantibus; lutescente-olivaceâ.*

THE MUCH-KNOTTED UNIO. Shell somewhat squarely ovate, posteriorly slopingly expanded, then truncated, tumidly warted, warts plicately radiating on the posterior area; yellowish-olive.

LEA, Trans. Amer. Phil. Soc., Second Series, vol. x. pl. 3; Obs. vol. iv. p. 45. pl. 3. f. 8.

Hab. North Carolina, North America.

The posterior side has a rather quadrately expanded form, and its area is especially characterized by the warts ranging in radiating folds.

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Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XIII.

Fig. 47.

This shell, *U. nodiferus*, Conrad, is a noduled variety of Mr. Lea's *U. Schoolcraftensis*, described at Pl. I. Sp. 3.

Species 48. (Mus. Cuming.)

UNIO INTERMEDIUS. *Un. testâ subquadrato-ovatâ, depressiusculâ, posticè flexuoso-contractâ, concentricè plicato-liratâ, verrucosâ, verrucis ad aream posticam plicato-radiantibus; aurantio-lutescente, viridi profusè punctatâ.*

THE INTERMEDIATE UNIO. Shell somewhat squarely ovate, rather depressed, posteriorly flexuously contracted, concentrically plicately ridged, warted, warts on the posterior area plicately radiating; orange-yellow, profusely dotted with green.

CONRAD, Anthony, MS. in Mus. Cuming.

Hab. North America.

A prettily painted species, conspicuously flexuously contracted on the posterior side.

Species 49. (Mus. Cuming.)

UNIO TAVOYENSIS. *Un. testâ obliquè ovatâ, posticè declivi-dilatatâ et obtusè angulatâ, acutè undato-corrugatâ, rugis versus marginem ventralem evanidis; sordidè olivaceâ.*

THE TAVOY UNIO. Shell obliquely ovate, posteriorly slopingly dilated and obtusely angled, sharply zigzag wrinkled, wrinkles fading towards the ventral margin; dull olive.

GOULD, Pro. Nat. Hist. Soc. Boston, 1843, vol. i. p. 138. Otia, Conch. p. 189.

Hab. Tavoy, Burmah; Rev. F. Mason.

This eastern Unio, it will be seen, is a totally different type from the American species.

Fig. 50.

The normal form of *U. cicatricosus*, of which a characteristic produced variety is given at Pl. VIII. Fig. 31.

Species 51. (Mus. Cuming.)

UNIO NODULATUS. *Un. testâ suborbiculari, posticè quadrato-alatâ, tuberculato-nodulatâ, nodulis amplis, paucis, lutescente-olivaceâ.*

THE NODULED UNIO. Shell nearly orbicular, posteriorly squarely winged, tubercularly noduled, nodules large, few; yellowish-olive.

RAFINESQUE, Mon. Coq. de la riv. Ohio, Ann. Gen. Sc. Phys. Brux. 1820, vol. v. p. 287.

Hab. North America.

Quadrately winged on the posterior side with the nodules few and large.

Species 52. (Mus. Cuming.)

UNIO STAPES. *Un. testâ subtrigonâ, crassâ, posticè flexuosè rotundato-angulatâ, deinde truncatâ, obscurè verrucatâ; virescente-olivaceâ.*

THE STIRRUP UNIO. Shell somewhat triangular, thick, posteriorly flexuously rotundately angled, then truncated, obscurely warted; greenish-olive.

LEA, Trans. Amer. Phil. Soc. 1830, Obs. vol. i. p. 87. pl. 7. f. 8.

Hab. Alabama, North America.

A shell of solid growth, contracted and tumidly angled on the posterior side.

Fig. 53.

This remarkably lobed shell is the male *U. flexuosus*, of which the female is given at Pl. VI. Fig. 22.

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Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XIV.

Species 54. (Mus. Cuming.)

UNIO RANGIANUS. *Un. testâ suboblongo-ovatâ, posticè flexuoso-productâ, obsoletè radiatim tuberculatâ; lutescente-olivaceâ, viridi lineari-radiatâ.*

RANG'S UNIO. Shell rather oblong-ovate, posteriorly flexuously produced, obsoletely radiately tubercled: yellowish-olive, linearly rayed with green.

LEA, Trans. Amer. Phil. Soc. 1837, Obs. vol. ii. p. 95. pl. 18. f. 56.

Hab. Ohio River, North America.

Very like *U. gibbosus*, with the tubercles obsolete.

Species 55. (Mus. Cuming.)

UNIO PENITUS. *Un. testâ subtrigono-oblongâ, gibbosissimâ, posticè flexuoso-tumidâ et radiatim incisâ, deinde latè truncatâ; lutescente-olivaceâ.*

THE TAILED UNIO. Shell somewhat triangularly oblong, very gibbous, posteriorly flexuously swollen and radiately incised, then broadly truncated; yellowish-olive.

CONRAD, Freshwater Shells, p. 33. pl. 5. f. 1.

Hab. Alabama, North America.

Distinguished by a produced swelling of the posterior angle, which is radiately incised.

Species 56. (Mus. Cuming.)

UNIO INTERRUPTUS. *Un. testâ arcuato-securiformi, posticè tumido-angulatâ, deinde declivi-truncatâ, medio subcompressâ, ad angulum radiatim crispato-sulcatâ; lutescente-olivaceâ, viridi interruptè lineari-radiatâ.*

THE INTERRUPTED UNIO. Shell arcuately wedge-shaped, posteriorly tumidly angled, then slopingly truncated, rather compressed in the middle, radiately crispately grooved at the angle; yellowish-olive, interruptedly linearly rayed with green.

RAFINESQUE, Mon. Coq. de la riv. Ohio, Ann. Gen. Sc. Phys. Brux. 1820, vol. v. p. 287.
Unio brevidens, Lea.

Hab. Ohio River, North America.

A solid compressed shell, arcuately curved down the posterior side, the angle of which is broadly swollen.

Species 57. (Mus. Cuming.)

UNIO ARCÆFORMIS. *Un. testâ oblongo-cymbæformi, gibbosissimâ, posticè tumido-angulatâ, deinde latissimè truncatâ; sordidè olivaceâ.*

THE ARCA-SHAPED UNIO. Shell oblong-boat-shaped, very gibbous, posteriorly tumidly angled, then very broadly truncated; dark olive.

LEA, Trans. Amer. Phil. Soc. 1830. Obs.-vol. i. p. 126. pl. 17. f. 44.
Unio nexus, Say.

Hab. Tennessee River, North America.

A peculiarly gibbous species, in which the posterior angle bulges out on either side, as in the typical form of *Byssoarca*.

Species 58. (Mus. Cuming.)

UNIO SOWERBYANUS. *Un. testâ trigono-cordatâ, posticè flexuoso-impressâ et radiatim sulcatâ, anticè lævigatâ; intensè olivaceâ.*

SOWERBY'S UNIO. Shell triangularly cordate, posteriorly flexuously impressed and radiately grooved, anteriorly smooth; dark olive.

LEA, Trans. Amer. Phil. Soc. 1832, Obs. vol. i. p. 180. pl. 10. f. 28.

Hab. Tennessee, North America.

Striately grooved in a very characteristic manner on the posterior side, which is concavely flexuous.

Species 59. (Mus. Cuming.)

UNIO PILEUS. *Un. testâ trigono-cordatâ, posticè concavâ, deinde flexuoso-truncatâ, lævigatâ; lutescente-olivaceâ viridi lineari-radiatâ.*

THE CAP UNIO. Shell triangularly cordate, posteriorly concave, then flexuously truncated, smooth; yellowish-olive, linearly rayed with green.

LEA, Trans. Amer. Phil. Soc. 1830, Obs. vol. i. p. 129. pl. 18. f. 47.

Hab. Ohio River, North America.

Resembling *U. Sowerbyanus* a good deal in form, but the posterior side does not present the characteristic grooving of that species.

Species 60. (Mus. Cuming.)

UNIO SULCATUS. *Un. testâ oblongo-Donaciformi, anticè brevissimâ, posticè compressè productâ, flexuoso-impressâ, obsoletè sulcatâ; lutescente-olivaceâ, fusco-viridi lineari-radiatâ.*

THE GROOVED UNIO. Shell oblong-Donax-shaped, anteriorly very short, posteriorly compressly produced, flexuously impressed, obsoletely grooved; yellowish-olive, linearly rayed with fuscous-green.

LEA, Trans. Amer. Phil. Soc. 1829, Obs. vol. i. p. 44. pl. 8. f. 12.

Hab. Ohio River, North America.

Unusually short on the anterior side, the posterior being compressly produced after the manner of a *Donax*.

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Sowerby, del. et. lith.

Vincent Brooks, Imp.

UNIO.

PLATE XV.

Species 61. (Mus. Cuming.)

UNIO DEVIATUS. *Un. testâ oblongo-quadratâ, anticè abbreviato-attenuatâ, posticè ampliter expansâ, angulariter latè truncatâ; lutescente-olivaceâ, viridi copiosè radiatim lineatâ.*

THE DEVIATING UNIO. Shell oblong-square, anteriorly shortly attenuated, posteriorly largely expanded, angularly broadly truncated; yellowish-olive, copiously radiately lineated with green.

ANTHONY, MS. in Mus. Cuming.

Hab. North America.

Truncately fan-shaped on the posterior side, rather attenuated anteriorly.

Species 62. (Mus. Cuming.)

UNIO HAYSIANUS. *Un. testâ ovato-globosâ, gibbosissimâ, posticè radiatim liratâ et lineari-sulcatâ, liris versus marginem serratis, anticè lævigatâ; lutescente-olivaceâ.*

HAYS' UNIO. Shell ovately globose, very gibbous, posteriorly radiately ridged and linearly grooved, ridges serrated towards the margin, anteriorly smooth; yellowish-olive.

LEA, Trans. Amer. Phil. Soc. 1832. Obs. vol. i. p. 147. pl. 3. f. 7.

Hab. Cumberland River, North America.

The posterior area is often defined by a prominent ridge-like swelling radiating to the ventral margin.

Species 63. (Mus. Cuming.)

UNIO RIDIBUNDUS. *Un. testâ suboblongo-quadratâ, gibbosiusculâ, anticè sublatâ, ventricosâ, posticè flexuoso-truncatâ, obscurè lineari-sulcatâ, liris versus marginem serratis; lutescente-olivaceâ, viridi lineari-radiatâ.*

THE LAUGHING UNIO. Shell somewhat oblong-square, rather gibbous, anteriorly rather broad and ventricose, posteriorly flexuously truncated, obscurely linearly grooved, ridges serrated towards the margin; yellowish-olive, linearly rayed with green.

SAY, Amer. Conch.

Hab. North America.

This closely resembles *U. sulcatus*, of which species Mr. Lea believes it to be the female. It differs materially in respect of form, being more of an oblong square.

Species 64. (Mus. Cuming.)

UNIO PERSONATUS. *Un. testâ subquadrato-orbiculari, perobliquâ, gibbosâ, posticè radiatim flexuoso-undatâ, lineari-sulcatâ, umbonibus prominentibus; sordidè fusco-olivaceâ.*

THE MASKED UNIO. Shell somewhat squarely orbicular, very oblique, gibbous, posteriorly radiately flexuously waved, linearly grooved, umboes prominent; dull fuscous olive.

SAY, Conrad, Monog. pl. 24.

Unio capillaris, Lea.

Hab. Ohio River, North America.

A round gibbose shell with prominent umboes radiately linearly grooved on the posterior side.

Species 65. (Mus. Cuming.)

UNIO EDGARIANUS. *Un. testâ compressè cuneiformi, medio contractâ, posticè declivi-angulatâ; lutescente-olivaceâ, nigricante-viridi copiosè radiatâ.*

EDGAR'S UNIO. Shell compressly wedge-shaped, contracted in the middle, posteriorly slopingly angled; yellowish-olive, copiously rayed with blackish-green.

LEA, Trans. Amer. Phil. Soc. Second Series, vol. viii. Obs. vol. iii. p. 52. pl. 15. f. 30.

Hab. Tennessee River, North America.

A very compressed wedge-shaped shell, copiously radiately pencilled with very dark green.

Species 66. (Mus. Cuming.)

UNIO STEWARDSONII. *Un. testâ obliquè quadratâ, gibboso-convexâ, posticè tumido-bipartitâ, anticè brevissimâ; lævigatâ, fuscescente-olivaceâ.*

STEWARDSON'S UNIO. Shell obliquely square, gibbously convex, posteriorly tumidly bipartite, anteriorly very short; smooth, fuscous-olive.

LEA, Trans. Amer. Phil. Soc. Second Series, vol. x. Obs vol. v. p. 34. pl. 23. f. 36.

Hab. Chatanooga River, North America,

Curiously bipartite on the posterior side; each part being smooth and convexly swollen.

Species 67. (Mus. Cuming.)

UNIO SACCULUS. *Un. testâ subquadrato-oblongâ, anticè declivi-contractâ, posticè latè ampliter expansâ, obscurè radiatim lineari-sulcatâ, lutescente-olivaceâ.*

THE LITTLE BAG UNIO. Shell somewhat squarely oblong, anteriorly slopingly contracted, posteriorly broadly largely expanded, obscurely radiately linearly grooved, yellowish-olive.

ANTHONY, MS. in Mus. Cuming.

Hab. North America.

This partakes somewhat of the character of the preceding species, though not bipartite posteriorly.

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Sowerby. del. et lith.

Vincent Brooks Imp.

UNIO.

PLATE XVI.

Species 68. (Mus. Cuming.)

UNIO NUCLEOPSIS. *Un. testâ obliquè ovatâ, solidâ, posticè vix ungulatâ; lævigatâ, fulvo-olivaceâ.*

THE KERNEL UNIO. Shell obliquely ovate, solid, posteriorly scarcely angled; smooth, fulvous-olive.

CONRAD, Anthony, MS. in Mus. Cuming.

Hab. North America.

Of very simple character.

Species 69. (Mus. Cuming.)

UNIO CHATTANOOGAENSIS. *Un. testâ perobliquè cuneatâ, versus umbones tumidâ, anticè brevissimâ, posticè attenuato-productâ; fulvo-olivaceâ, nigricante-viridi concentricè subremotè fasciatâ.*

THE CHATTANOOGA UNIO. Shell very obliquely wedge-shaped, swollen towards the umboes, anteriorly very short, posteriorly attenuately produced; fulvous-olive, concentrically rather distantly banded with dark-green.

LEA, Journ. Acad. Nat. Sci. Phil. second series, vol. iv. Obs. vol. vii. p. 27. pl. 25. f. 30.

Hab. Chattanooga, North America.

A very characteristic species, peculiarly obliquely wedge-shaped, painted with rather distant concentric bands.

Species 70. (Mus. Cuming.)

UNIO RAVENELIENSIS. *Un. testâ obliquè ovatâ, compressiusculâ, anticè rotundatâ, posticè declivi-productâ, vix angulatâ; brunnescente-olivaceâ.*

RAVENEL'S UNIO. Shell obliquely ovate, rather compressed, anteriorly rounded, posteriorly slopingly produced, scarcely angled; brownish-olive.

LEA, Trans. Amer. Phil. Soc. 1832. Obs. vol. i. p. 144. pl. 3. f. 5.

Hab. Tennessee River, North America.

A rounded form of oblique growth, compressed towards the ventral margin.

Species 71. (Mus. Cuming.)

UNIO DECISUS. *Un. testâ perobliquè cuneiformi, versus umbones crassâ, gibbosâ, anticè abbreviato-truncatâ, posticè compressè elongato-productâ; lutescente-olivaceâ, nigricante-viridi obscurè irregulariter concentricè fasciatâ.*

THE FALLEN UNIO. Shell very obliquely wedge-shaped, thick and gibbous towards the umboes, anteriorly shortly truncated, posteriorly compressly elongately produced; yellowish-olive, obscurely irregularly concentrically banded with dark-green.

LEA, Trans. Amer. Phil. Soc. 1830. Obs. vol. i. p. 102. pl. 12. f. 23.

Hab. Alabama River, North America.

Peculiarly thick and heavy about the umboes.

Species 72. (Mus. Cuming.)

UNIO MUNDUS. *Un. testâ sublatè cuneiformi, crassâ, anticè brevissimâ, posticè obliquè declivi-productâ; fulvescente-olivaceâ, viridi concentricè maculatâ.*

THE NEAT UNIO. Shell rather broadly wedge-shaped, thick, anteriorly very short, posteriorly obliquely slopingly produced; fulvous-olive, concentrically blotched with green.

LEA, MS. in Mus. Cuming.

Hab. North America.

Of a broad wedge-shaped form, with the green colouring in concentric band-like blotches.

Species 73. (Mus. Cuming.)

UNIO CUNEATUS. *Un. testâ oblongo-cuneiformi, valdè compressâ, medio contractâ, posticè declivi-productâ, vix angulatâ; fulvo-olivaceâ, viridi radiatim maculatâ.*

THE WEDGE-SHAPED UNIO. Shell oblong wedge-shaped, very compressed, contracted in the middle, posteriorly slopingly produced, scarcely angled; fulvous-olive, radiately blotched with green.

RAFINESQUE, Mon. Coq. de la riv. Ohio, Ann. Gen. Sc. Phys. Brux. 1820, vol. v. p. 287.

Hab. North America.

A very compressed wedge-shaped form, with the green painting not in concentric bands, but in rays.

Species 74. (Mus. Cuming.)

UNIO WOODWARDIANUS. *Un. testâ subtrigono-ovatâ, parum cuneiformi, anticè subproductâ, rotundatâ, posticè angulato-productâ, areâ posticâ exiliter lineari-sulcatâ; flavido-virescente, intensè viridi radiatim maculatâ.*

WOODWARD'S UNIO. Shell somewhat triangularly ovate, but little wedge-shaped, anteriorly rather produced, rounded, posteriorly angularly produced, the posterior area faintly linearly grooved; yellowish-green, radiately blotched with dark-green.

LEA, Pro. Acad. Nat. Sci. Phil. 1857, p. 170. Obs. vol. vii. p. 17. pl. 23. f. 82.

Hab. Georgia, North America.

Of a delicate greenish-yellow, radiately blotched with dark-green.

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79.b.

79.a.

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Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XVII.

Species 75. (Mus. Cuming.)

UNIO LENIOR. *Un. testâ oblongo-ovatâ, tenuiculâ, anticè attenuato-rotundatâ, posticè latè productâ, gibbosiusculâ, ad extremitatem flexuoso-subpartitâ, prope marginem lineari-sulcatâ; fulvescente-olivaceâ.*

THE SMOOTHER UNIO. Shell oblong-ovate, rather thin, anteriorly attenuately rounded, posteriorly broadly produced, rather gibbous, flexuously subpartite at the extremity, linearly grooved near the margin; fulvous-olive.

LEA, Trans. Amer. Phil. Soc. 1840. Obs. p. 42. pl. 12. f. 18.

Hab. Tennessee, North America.

A delicate, small species, having somewhat the appearance of a *Modiola*.

Species 76. (Mus. Cuming.)

UNIO HANLEYANUS. *Un. testâ oblongo-cuneiformi, crassiusculâ, versus umbones gibbosâ, utrinque rotundatâ, latere postico obliquè declivi, vix angulato; fulvo-olivaceâ, fusco concentricè remotè fasciatâ.*

HANLEY'S UNIO. Shell oblong wedge-shaped, rather thick, gibbous towards the umboes, rounded at each end, posterior side obliquely sloping, scarcely angled; fulvous-olive, concentrically distantly banded with brown.

LEA, Trans. Amer. Phil. Soc. Second Series, vol. x.; Obs. vol. v. p. 35. pl. 23. f. 37.

Hab. Georgia, North America.

Of a gibbous, oblong-ovate form, although partaking of the character of the wedge-shaped species of the preceding Plate.

Species 77. (Mus. Cuming.)

UNIO MEDIUS. *Un. testâ obliquè cuneiformi, anticè valde gibbosâ, posticè attenuato-compressâ, obscurè flexuoso-angulatâ; fulvo-olivaceâ, fusco concentricè remotè fasciatâ.*

THE MIDDLE UNIO. Shell obliquely wedge-shaped, anteriorly very gibbous, posteriorly attenuately compressed, obscurely flexuously angled; fulvous-olive, concentrically distantly banded with brown.

LEA, Pro. Acad. Nat. Sci. Phil. 1861. p. 40; Obs. vol. vii. p. 82. pl. 10. f. 227.

Hab. Alabama, North America.

Particularly swollen and gibbous towards the umboes.

Species 78. (Mus. Cuming.)

UNIO SUBROSTRATUS. *Un. testâ elongato-ovatâ, compressiusculâ, utrinque rotundatâ, posticè subattenuatâ, lævigatâ, obscurè concentricè rugatâ; lutescente-olivaceâ, viridi undique interruptè radiatâ.*

THE SLIGHTLY-BEAKED UNIO. Shell elongately-ovate, rather compressed, rounded at each end, posteriorly rather attenuated, smooth, obscurely concentrically wrinkled; yellowish-olive, interruptedly rayed throughout with green.

SAY, Anthony, MS. in Mus. Cuming.

Hab. North America.

There is a marked regularity about the interruptedly-rayed painting of this species.

Species 79. (Fig. *a*, male; Fig. *b*, female; Mus. Cuming.)

UNIO CAPSÆFORMIS. *Un. testâ ovatâ, tenuiculâ, anticè attenuato-rotundatâ, posticè interdum declivi-angulatâ, interdum latè compressè expansâ; virescente-olivaceâ, intensè viridi copiosè lineari-radiatâ et tinctâ.*

THE CAPSA-SHAPED UNIO. Shell ovate, rather thin, anteriorly attenuately rounded, posteriorly sometimes slopingly angled, sometimes broadly compressly expanded; greenish-olive, copiously linearly rayed and stained with dark-green.

LEA, Trans. Amer. Phil. Soc. 1831; Obs. vol. i. p. 143. pl. 2. f. 4.

Hab. Cumberland River, North America.

The two specimens here figured are given, on the authority of Mr. Anthony, as the male and female of the same species.

Species 80. (Mus. Cuming.)

UNIO TURGIDULUS. *Un. testâ subcordato-ovatâ, gibbosâ, anticè rotundatâ, posticè flexuoso-triangulatâ, obscurè lineari-sulcatâ; pallidè virescente-olivaceâ.*

THE SLIGHTLY-SWOLLEN UNIO. Shell somewhat cordately ovate, gibbous, anteriorly rounded, posteriorly flexuously two-angled, obscurely linearly grooved; pale greenish-olive.

LEA, Pro. Acad. Nat. Sci. Phil. 1858, p. 40; Obs. vol. viii. p. 66. pl. 5. f. 211.

Hab. Cumberland River, North America.

The posterior side of this species is lightly doubly angled.

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Vincent Brooks Imp.

Sowerby del et lith.

UNIO.

PLATE XVIII.

Species 81. (Mus. Cuming.)

UNIO DEPRESSUS. *Un. testâ ovali, utrinque rotundatâ, concentricè rudè rugatâ, latere postico latiore; nigricante-fuscâ.*

THE DEPRESSED UNIO. Shell oval, rounded at each end, concentrically rudely wrinkled, posterior side broader; blackish-brown.

LAMARCK, Anim. sans vert. vol. vi. p. 544.

Unio Balonensis, Conrad.

Hab. Australia.

A shell of simple oval form, moderately convex, of which the posterior side is rather the broader.

Species 82. (Mus. Cuming.)

UNIO PERDIX. *Un. testâ obliquè ovatâ, compressiusculâ, anticè subabbreviatâ, rotundatâ, posticè declivè subattenuato-productâ; lutescente-olivaceâ, intensè viridi copiosè latiradiatâ.*

THE PARTRIDGE UNIO. Shell obliquely ovate, rather compressed, anteriorly rather shortened, posteriorly slopingly rather attenuately produced; yellowish-olive, copiously broadly rayed with dark-green.

LEA, Trans. Amer. Phil. Soc. 1832; Obs. vol. i. p. 184. pl. 11. f. 31.

Unio pectorosus, Conrad.

Hab. Tennessee, North America.

A prettily-rayed species of very regular growth.

Species 83. (Mus. Cuming.)

UNIO VITTATUS. *Un. testâ subquadrato-ovatâ, subobliquâ, tenui, anticè rotundatâ, posticè subquadrato-expansâ, truncatâ, lævigatâ, nitente, creberrimè concentricè filo-striatâ; sordidè fulvo-olivaceâ.*

THE FILLETED UNIO. Shell somewhat squarely ovate, rather oblique, thin, anteriorly rounded, posteriorly somewhat squarely expanded, truncated, smooth, shining, very closely concentrically thread-striated, dull fulvous-olive.

LEA, Pro. Acad. Nat. Sci. Phil. 1859, p. 153; Obs. vol. vii. p. 67. pl. 38. f. 128.

Hab. Australia.

A thin *Anodon*-like species of a peculiar dull fulvous-olive colour, sculptured throughout with close-set concentric thread-like striæ.

Species 84. (Mus. Cuming.)

UNIO OBESUS. *Un. testâ oblongo-trapezoideâ, gibbosiusculâ, anticè brevissimâ, rotundatâ, posticè declivè quadrato-angulatâ, truncatâ, olivaceo-nigrâ, epidermide rugoso-striatâ.*

THE STOUT UNIO. Shell oblong-trapezoid, rather gibbous, anteriorly very short, rounded, posteriorly slopingly quadrately angled, truncated, olive-black. epidermis rugosely striated.

LEA, Trans. Amer. Phil. Soc. 1830; Obs. vol. i. p. 106. pl. 13. f. 26.

Hab. York River, Virginia, North America.

A coarsely-striated shell, much produced posteriorly into a sloping truncated angle.

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Sowerby, del et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XIX.

Species 85. (Mus. Cuming.)

UNIO MISSISSIPPIENSIS. *Un. testâ oblongâ, posticè sub-lanceolato-angulatâ, anticè rotundatâ, lævigatâ; fulvâ, olivaceo tinctâ, intensè viridi copiosè radiatâ.*

THE MISSISSIPPI UNIO. Shell oblong, posteriorly somewhat lanceolately angular, anteriorly rounded, smooth, fulvous, stained with olive, copiously rayed with dark-green.

CONRAD, MS. in Mus. Cuming.

Hab. Mississippi River, North America.

A dark-rayed species, peculiarly lanceolately angular on the posterior side.

Species 86. (Mus. Cuming.)

UNIO RECTUS. *Un. testâ elongato-ovatâ, anticè latiore, brevi, rotundatâ, medio subcompressâ, posticè attenuato-productâ; fulvo-olivaceâ, plus minus viridi radiatâ.*

THE STRAIGHT UNIO. Shell elongately ovate, anteriorly broader, short, rounded, somewhat compressed in the middle, posteriorly attenuately produced; fulvous-olive, more or less rayed with green.

LAMARCK, Anim. sans vert. vol. vi. p. 537.

Mya prælonga, Wood.

Unio prælongus, Barnes.

Hab. North America.

A fine species of heavy substance, sometimes narrower and more lanceolate than the specimen figured.

Species 87. (Mus. Cuming.)

UNIO ANODONTOIDES. *Un. testâ elongato-ovatâ, anticè brevi, rotundatâ, posticè acuminato-productâ, lævigatâ, politâ; pallidè cinereo-fulvescente.*

THE ANODONTA-LIKE UNIO. Shell elongately ovate, anteriorly short, rounded, posteriorly acuminately produced, smooth, polished; pale ash-fulvous.

LEA, Trans. Amer. Phil. Soc. 1830; Obs. vol. i. p. 91. pl. 8. f. 11.

Unio teres, Conrad.

Hab. North America.

This species, as its name implies, has very much the appearance of an *Anodonta*, but the shell is naturally thicker and heavier than in any species of that genus.

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Sowerby, del et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XX.

Species 88. (Mus. Cuming.)

UNIO BUDDIANUS. *Un. testâ elongato-oblongâ, gibbosâ, anticè brevissimâ, rotundatâ, posticè angulato-productâ, ad extremitatem obliquè subquadratâ; nigrâ.*

BUDD'S UNIO. Shell elongately oblong, gibbous, anteriorly very short, rounded, posteriorly angularly produced, obliquely subquadrate at the extremity; black.

LEA, Trans. Amer. Phil. Soc. 1843; Obs. vol. iv. p. 35. pl. 40. f. 5.

Hab. Florida, North America.

A black shell, obliquely subquadrate at the posterior extremity, the angle being conspicuous, but rather obtuse.

Species 89. (Mus. Cuming.)

UNIO CUCUMOIDES. *Un. testâ elongato-oblongâ, anticè brevi subattenuato-rotundatâ et concentricè rugosâ, posticè obliquè subquadratâ, valde productâ, undique peculiariter corrugato-verrucosâ; nigrâ.*

THE CUCUMBER-LIKE UNIO. Shell elongately oblong, anteriorly short, somewhat attenuately rounded, and concentrically wrinkled, posteriorly obliquely subquadrate, very much produced, peculiarly corrugately warted throughout; black.

LEA, Trans. Amer. Phil. Soc. 1840; Obs. vol. iv. p. 30. pl. 7. f. 2.

Hab. Hunter's River, New South Wales.

A bold, black species, considerably obliquely produced on the posterior side, where it is sculptured with diversely radiating wrinkled warts.

Species 90. (Mus. Cuming.)

UNIO SHEPARDIANUS. *Un. testâ flexuoso-lanceolatâ, medio compressâ, anticè brevissimâ, rotundatâ, posticè valde productâ, obtusè angulatâ, deinde acuminatâ; nigrâ.*

SHEPARD'S UNIO. Shell flexuously lanceolate, compressed in the middle, anteriorly very short, rounded, posteriorly very much produced, obtusely angled, then acuminated; black.

LEA, Trans. Amer. Phil. Soc. 1834; Obs. vol. i. p. 207. pl. 13. f. 38.

Hab. Georgia, North America.

Curiously distinguished by the narrow, flexuous prolongation of the posterior side.

January, 1865.

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Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XXI.

Fig. 91. (Mus. Cuming.)

The shell here figured is a typical specimen of the *Unio ater* of Nilsson, which has been pronounced by Lea to be one of the numerous European forms of *Margaritana margaritifera*.

Species 92. (Mus. Cuming.)

UNIO MELLEUS. *Un. testâ oblongo-ovatâ, compressiusculâ, posticè elliptico-expansâ, latere antico rotundato, postico obsoletè angulato, concentricè densè lirato-striatâ, ad umbones plicato-corrugatâ; olivaceo-stramineâ.*

THE HONEY UNIO. Shell oblong-ovate, rather compressed, posteriorly elliptically expanded, anterior side rounded, posterior obsoletely angled, densely concentrically ridge-striated, plicately wrinkled at the umboes; olive straw-colour.

LEA, Pro. Acad. Nat. Sci. Philad. 1859, p. 152. Obs. vol. vii. p. 68. pl. 38. f. 129.

Hab. ——?

Of an olive straw-colour, elliptically expanded and densely ridge-striated throughout, with the umboes plicately wrinkled.

Species 93. (Mus. Cuming.)

UNIO PATAGONICUS. *Un. testâ elliptico-ovatâ, compressiusculâ, posticè obtusè angulatâ, latere antico rotundato, postico expanso, concentricè filo-striatâ; nigricante-fuscâ.*

THE PATAGONIAN UNIO. Shell elliptically ovate, rather compressed, posteriorly obtusely angled, anterior side rounded, posterior expanded, concentrically thread-striated; dark-brown.

D'ORBIGNY, Voy. dans l'Amér. Mérid. pl. 70. f. 1 to 4.

Hab. Patagonia.

A rather compressed elliptically-ovate shell, concentrically thread-striated throughout.

Species 94. (Mus. Cuming.)

UNIO NASUTUS. *Un. testâ elongato-ovatâ, latere antico rotundato, postico elliptico-angulato, versus extremitatem acuminato-rostrato; nigricante-olivaceâ, viridi obscurè radiatâ.*

THE BEAKED UNIO. Shell elongately ovate, anterior side rounded, posterior elliptically angled, acuminately beaked towards the extremity; dark-olive, obscurely rayed with green.

SAY, Swainson, Zool. Illus. 1st Series.

Mya nasuta, Wood.

Unio rostratus, Valenciennes.

Eurynea nasuta, Stimpson.

Hab. North America.

Distinguished by its elliptically-beaked posterior extremity.

Species 95. (Mus. Cuming.)

UNIO FUSCATUS. *Un. testâ oblongo-ovatâ, latere antico rotundato, postico arcuato-subquadrato, vix angulatâ; nigricante-olivaceâ.*

THE BROWN UNIO. Shell oblong-ovate, anterior side rounded, posterior arcuately subquadrate, scarcely angled; dark-olive.

LEA, Trans. Amer. Phil. Soc. 1843. Obs. vol. iv. p. 35. pl. 40. f. 4.

Hab. Florida, North America.

The posterior side of this species is somewhat squared or truncated.

Species 96. (Mus. Cuming.)

UNIO SHANGHAIENSIS. *Un. testâ elongato-ovatâ, gibbosâ, latere antico rotundato, postico elliptico-acuminato; nigricante-viridi.*

THE SHANGHAI UNIO. Shell elongately ovate, gibbous, anterior side rounded, posterior elliptically acuminated; dark-green.

LEA, Pro. Acad. Nat. Sci. Philad. 1859, p. 153. Obs. vol. vii. p. 60. pl. 36. f. 121.

Hab. Shanghai, China.

A narrowly-ovate shell, conspicuously gibbous in form.

Fig. 97. (Mus. Cuming.)

A bright-coloured variety of *U. Anodontoides*, described and figured from an older specimen at Pl. XIX. Sp. 87.

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Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XXII.

Species 98. (Mus. Cuming.)

UNIO LITORALIS. *Un. testâ ovatâ, subæquilaterali, versus marginem compressâ, latere antico rotundato, postico declivi-expanso, umbonibus subamplis, obscurè plicato-corrugatis; lutescente-olivaceâ, viridi lineari-radiatâ.*

THE LITORAL UNIO. Shell ovate, nearly equilateral, compressed towards the margin, anterior side rounded, posterior slopingly expanded, umboes rather large, obscurely plicately wrinkled; yellowish-olive, linearly rayed with green.

CUVIER, Hist. Nat. des Anim. vol. i.

Unio crassus, Retz.
Unio brevialis, Lamarck.
Unio semirugata, Lamarck.
Unio nana, Lamarck.
Unio subtetragona, Michaud.
Unio incurvus, Lea.
Unio Pianensis, Farines.
Unio granosus, Schumacher.
Unio brunneus, Bonhomme.
Unio Woolwichii, Morelet.
Unio rhomboidea, Schreibers.

Hab. Europe.

Of a compressed *Crassatella*-like form, generally much eroded.

Species 99. (Mus. Cuming.)

UNIO DEMERARAENSIS. *Un. testâ elliptico-ovatâ, latere antico declivi-rotundato, postico truncato-angulato, concentricè densè filo-striatâ; nigricante-olivaceâ.*

THE DEMERARA UNIO. Shell elliptically ovate, anterior side slopingly rounded, posterior truncately angled, concentrically densely thread-striated; dark-olive.

LEA, Pro. Acad. Nat. Sci. Philad. 1859, p. 152.

Hab. Demerara.

A small elliptically-truncated shell, of rather light substance.

Species 100. (Mus. Cuming.)

UNIO AFRICANUS. *Un. testâ oblongo-ovatâ, latere antico rotundato, postico declivi-expanso, obsoletè angulato, umbonibus corrugato-striatis; flavescente-olivaceâ.*

THE AFRICAN UNIO. Shell oblong-ovate, anterior side rounded, posterior slopingly expanded, obsoletely angled, umboes wrinkle-striated; yellowish-olive.

LEA, Pro. Acad. Nat. Sci. Philad. 1859, p. 152.

Hab. Borneo.

A shell of simple character, but very neatly wrinkled about the umboes with raised thread-like striæ.

Species 101. (Mus. Cuming.)

UNIO TESTUDINEUS. *Un. testâ suboblongo-ovatâ, latere antico compressiusculo, concentricè tenuilirato, postico truncato-expanso, versus umbones obtusè angulato; livido-olivaceâ.*

THE TORTOISE-SHELL UNIO. Shell somewhat oblong-ovate, anterior side rather compressed, concentrically finely ridged, posterior truncately expanded, obtusely angled towards the umboes; livid-olive.

MORELET, Moll. terr. et fluv. de Port.

Hab. Rio Usumasinto, Portugal.

The peculiar livid colouring of this species gives it a little of the general aspect of a *Lutraria*.

Species 102. (Mus. Cuming.)

UNIO PLICATULUS. *Un. testâ subelongato-oblongâ, tenuiculâ, latere antico rotundato, concentricè lirato-striato, postico truncato-acuminato, usque ad umbones densè divaricato-corrugato; flavescente-olivaceâ, nigricante-viridi interruptè lineari-radiatâ.*

THE FINELY-PLAITED UNIO. Shell somewhat elongately oblong, rather thin, anterior side rounded, concentrically ridge-striated, posterior truncately acuminated, densely divaricately wrinkled as far as the umboes; yellowish-olive, interruptedly linearly rayed with dark green.

LEA, Pro. Acad. Nat. Sci. Philad. vol. viii. p. 94. Obs. vol. vi. p. 20. pl. 27. f. 15.

Hab. Cape of Good Hope.

Well characterized by the finely-divaricated wrinkling of the shell on the posterior side and around the umboes.

Species 103. (Mus. Cuming.)

UNIO VELLICATUS. *Un. testâ elliptico-ovatâ, latere an-*

tico obtusè rotundato, concentricè lirato-striato, postico obliquè arcuato-expanso, deinde acuminato, versus marginem ventralem peculiariter vellicato; ustulato-fuscâ.

THE PINCHED UNIO. Shell elliptically ovate, anterior side obtusely rounded, concentrically ridge-striated, posterior side obliquely arcuately expanded, then acuminated, peculiarly pinched towards the ventral margin; burnt-brown.

Hab. Guatemala.

A new species from Guatemala, of a reddish burnt-brown colour, pinched in a characteristic manner towards the posterior ventral margin.

Species 104. (Mus. Cuming.)

UNIO COCCINEUS. *Un. testâ subquadrato-ovatâ, crassâ, latere antico declivi-rotundato, postico truncato-angulato; olivaceo-fuscâ.*

THE SCARLET UNIO. Shell somewhat squarely ovate, thick, anterior side slopingly rounded, posterior truncately angled; olive-brown.

LEA, Trans. Amer. Phil. Soc. 1834. Obs. vol. ii. p. 12. pl. 5. f. 12.

Unio catillus, Conrad.

Hab. Ohio River, North America.

The interior of this species is sometimes white, but generally of a deep salmon-red colour.

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Sowerby, del. et. lith.

Vincent Brooks Imp.

UNIO.

PLATE XXIII.

Species 105. (Mus. Cuming.)

UNIO THWAITESII. *Un. testâ ovatâ, compressiusculâ, latere antico coarctato-rotundato, postico obliquè latè expanso, lævigatâ, circa umbones exiliter plicato-corrugatâ; flavescente-brunneâ, concentricè fasciatâ.*

THWAITES'S UNIO. Shell ovate, rather compressed, anterior side contractedly rounded, posterior obliquely broadly expanded, smooth, faintly plicately wrinkled about the umboes; yellowish-brown, concentrically banded.

LEA, Pro. Acad. Nat. Sci. Philad. 1859, p. 152.

Hab. Ceylon; Thwaites.

Concentrically banded with shining brown upon a yellowish ground.

Species 106. (Mus. Cuming.)

UNIO ROTUNDATUS. *Un. testâ latè ellipticâ, crassiusculâ, latere antico declivi-rotundato, postico obliquè latè truncato, obtusè angulato, ad angulum tumido, medio verrucosè plicato-corrugatâ; olivaceo-lutescente, viridi copiosè radiatim lineari-vittatâ.*

THE ROUNDED UNIO. Shell broadly elliptic, rather thick, anterior side slopingly rounded, posterior obliquely broadly truncated, obtusely angled, swollen at the angle, coarsely plicately wrinkled in the middle; olive-yellow, copiously radiately linearly filleted with green.

LAMARCK, Anim. sans vert. vol. vi. p. 538.

Unio suborbiculata, Lamarck.

Unio globulus, Say.

Unio subglobosus, Lea.

Hab. North America.

Full of striking details of character, but little deserving of the name given to it.

Species 107. (Mus. Cuming.)

UNIO CUNEOLUS. *Un. testâ subtrigono-cuneiformi, crassâ, latere antico brevissimo, subrecto, postico obtusè obliquè angulato; fulvâ, viridi posticè maculatâ.*

THE LITTLE WEDGE UNIO. Shell somewhat triangularly wedge-shaped, thick, anterior side very short, nearly straight, posterior obtusely obliquely angled; fulvous, posteriorly blotched with green.

LEA, Trans. Amer. Phil. Soc. 1840. Obs. vol. iii. p. 31. pl. 7. f. 3.

Hab. Tennessee, North America.

A solid wedge-shaped fulvous shell, rayed with large blotches of green on the posterior angle.

Species 108. (Mus. Cuming.)

UNIO BERLANDIERII. *Un. testâ ovatâ, ventricosâ, umbonibus tumidis, latere antico coarctato-rotundato, postico obliquè latè truncato, supernè compressè alato; fulvâ, nigricante-olivaceo tinctâ, nitente.*

BERLANDIER'S UNIO. Shell ovate, ventricose, with the umboes swollen, anterior side contractedly rounded, posterior obliquely broadly truncated, compressly winged at the upper part; fulvous, stained with dark olive, shining.

LEA, Pro. Acad. Nat. Sci. Philad. 1857, p. 101.

Hab. Mexico. Texas.

Of a distinct and very characteristic type, in which the epidermis is shining and horny.

Species 109. (Mus. Cuming.)

UNIO ALTILIS. *Un. testâ ovatâ, tenui, ventricosâ, latere antico subattenuato-rotundato, postico latè obtusè angulato; flavescente-olivaceâ, nigricante-viridi lineari-radiatâ.*

THE FATTED UNIO. Shell ovate, thin, ventricose, anterior side somewhat attenuately rounded, posterior broadly obtusely angled; yellowish-olive, linearly rayed with dark-green.

CONRAD, Freshwater Shells, p. 43. pl. 2. f. 1.

Hab. North America.

A light ventricose shell, prettily rayed with dark-green upon a yellowish-olive ground.

Species 110. (Mus. Cuming.)

UNIO NAPEANENSIS. *Un. testâ oblongo-ovatâ, latere antico subattenuato-rotundato, postico latè truncato-rotundato, vix angulato, circa umbones ampliter plicato-corrugatâ; fusco-nigricante.*

THE NAPEAN UNIO. Shell oblong-ovate, anterior side somewhat attenuately rounded, posterior broadly tr[illegible]ely rounded, scarcely angled, largely plicately wrink[illegible] about the umboes; fuscous-black.

CONRAD, MS. in Mus. Cuming.

Hab. —— ?

A pitchy-black shell, of rather light substance, very coarsely plicately wrinkled about the umboes.

Species 111. (Mus. Cuming.)

UNIO LAYARDI. *Un. testâ subobliquè ovatâ, ventricosâ, umbonibus tumidis, latere antico rotundato, postico declivi-truncato, haud angulato; fulvo-viridi, brunnescente tinctâ, lævigatâ, nitente.*

LAYARD'S UNIO. Shell rather obliquely ovate, ventricose, umboes swollen, anterior side rounded, posterior side slopingly truncated, not angled; fulvous-green, tinged with brown, smooth, shining.

LEA, Pro. Acad. Nat. Sci. Philad. 1859, p. 153.

Hab. Ceylon; F. Layard.

Of an *Anodon*-like form, covered by a beautiful shining horny epidermis.

112.

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118.

Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XXIV.

Species 112. (Mus. Cuming.)

UNIO MUTABILIS. *Un. testâ elongato-oblongâ, latere antico attenuato-rotundato, postico declivi, deinde truncato-rotundato, medio subcompressâ, undique rudè concentricè striatâ; fusco-nigricante.*

THE CHANGEABLE UNIO. Shell elongately oblong, anterior side attenuately rounded, posterior sloping, then truncately rounded, slightly compressed in the middle, rudely concentrically striated throughout; fuscous-black.

LEA, Pro. Acad. Nat. Sci. Philad. 1859, p. 52.

Hab. Brisbane Water and Murray River, Australia.

Covered with a coarse, rudely striated epidermis, which is generally much eroded.

Species 113. (Mus. Cuming.)

UNIO FISHERIANUS. *Un. testâ lanceolato-oblongâ, tenuiculâ, compressâ, valde inæquilaterali, latere antico brevi, rotundato, postico declivi-acuminato; fulvo-brunneâ.*

FISHER'S UNIO. Shell lanceolately oblong, rather thin, compressed, very inequilateral, anterior side short, rounded, posterior slopingly acuminated; fulvous-brown.

LEA, Trans. Amer. Phil. Soc. 1834. Obs. vol. ii. p. 8. pl. 4. f. 8.

Hab. Chester River, Maryland, North America.

Distinguished by the slender acuminated growth of the posterior side.

Species 114. (Mus. Cuming.)

UNIO NAVIGIOLIFORMIS. *Un. testâ subquadrato-oblongâ, crassiusculâ, latere antico brevi, acuminato-rotundato, postico abruptè truncato, undique densè filo-striatâ, supernè divaricato-radiatâ; fusco-nigricante.*

THE BOAT-SHAPED UNIO. Shell somewhat squarely oblong, rather thick, anterior side short, acuminately rounded, posterior abruptly truncated, densely thread-striated throughout, divaricately rayed at the upper part; fuscous-black.

LEA, Pro. Acad. Nat. Sci. Philad. 1859, p. 52.

Hab. ——?

Sculptured in a very peculiar divaricately wrinkled manner.

Species 115. (Mus. Cuming.)

UNIO PURPURATUS. *Un. testâ subquadrato-ovatâ, valde inæquilaterali, latere antico parvo, attenuato-rotundato, postico lato, ventricoso, expanso-rotundato, supernè subalato; fusco-nigricante.*

THE PURPLED UNIO. Shell somewhat squarely ovate, very inequilateral, anterior side small, attenuately rounded, posterior broad, ventricose, expandedly rounded, slightly winged at the upper part; fuscous-black.

LAMARCK, Anim. sans vert. vol. vi. p. 533.

Mya ventricosa, Solander.

Unio ater, Lea (not of Nilsson).

Unio lugubris, Say.

Unio Poulsoni, Conrad.

Hab. Louisiana, North America.

Remarkable for the large, ventricose, obliquely-expanded proportions of the posterior side. The interior is generally of a rich purplish salmon-colour.

Species 116. (Mus. Cuming.)

UNIO HALEIANUS. *Un. testâ ovatâ, tenuiculâ, ventricosâ, latere antico rotundato, postico obliquè acuminato, supernè subalato, umbonibus plicato-corrugatis; olivaceo-nigricante.*

HALE'S UNIO. Shell ovate, rather thin, ventricose, anterior side rounded, posterior obliquely acuminated, slightly winged at the upper part, umboes plicately wrinkled; olive-black.

LEA, Trans. Amer. Phil. Soc. 1842. Obs. vol. iii. p. 84. pl. 27. f. 63.

Hab. Mississippi, near New Orleans, North America.

The epidermis of this species is of a delicate velvety character.

Species 117. (Mus. Cuming.)

UNIO COCODUENSIS. *Un. testâ oblongo-ovatâ, versus marginem compressiusculâ, latere antico rotundato,*

postico obliquè angulato, deinde acuminato, supernè subalato; fulvo-olivaceâ, intensè viridi tinctâ et radiatâ.

The Cocodu Unio. Shell oblong-ovate, rather compressed towards the margin, anterior side rounded, posterior obliquely angled, then acuminated, slightly winged at the upper part; fulvous-olive, stained and rayed with dark-green.

White, MS. in Mus. Cuming.

Hab. ——?

Of the describing and naming of this species I know nothing, but it is a very characteristic one.

Species 118. (Mus. Cuming.)

Unio Moretonicus. *Un. testâ latè oblongâ, latere antico declivi-rotundato, postico obliquè angulato, deinde obliquè truncato; fusco-nigricante.*

The Moreton Unio. Shell broadly oblong, anterior side slopingly rounded, posterior obtusely angled, then obliquely truncated; fuscous-black.

Hab. Tasmania. Moreton Bay, Australia.

A rather coarsely striated shell, of simple character, but not agreeing, so far as I can make out, with any other described species.

119.

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Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XXV.

Species 119. (Mus. Cuming.)

UNIO GRAYANUS. *Un. testâ elongato-lanceolatâ, crassiusculâ, supernè latâ planatâ, latere antico brevissimo rotundato, postico longissimo, angulato-acuminato, circa umbones divaricatim plicato-corrugatâ; olivaceo-viridi.*

GRAY'S UNIO. Shell elongately lanceolate, rather thick, broad and flattened at the upper part, anterior side very short, rounded, posterior very long, angularly acuminated, divaricately plicately wrinkled about the umbocs; olive-green.

LEA, Trans. Amer. Phil. Soc. 1832. Obs. vol. i. p. 178. pl. 9. f. 26.

Hab. China.

Remarkable on account of its extremely narrow and posteriorly acuminated form.

Species 120. (Mus. Cuming.)

UNIO VIGNONANA. *Un. testâ oblongâ, medio compressâ, latere antico declivi-rotundato, postico declivi-truncato, obtusè angulato, undique conspicuè divaricatim corrugatâ; olivaceo-nigricante.*

THE VIGNON UNIO. Shell oblong, compressed in the middle, anterior side slopingly rounded, posterior slopingly truncated, obtusely angled, conspicuously divaricately wrinkled throughout; olive-black.

BERNARDI, MS. in Mus. Cuming.

Hab. ——?

The whole surface of this shell is curiously divaricately wrinkled.

Species 121. (Mus. Cuming.)

UNIO ELECTRINUS. *Un. testâ subquadrato-oblongâ, compressâ, latere antico rotundato, postico obliquè truncato, supernè subalato, ad umbones plicato-corrugatâ; fulvo-stramineâ, lævigatâ, vel tenuistriatâ.*

THE AMBER UNIO. Shell somewhat squarely oblong, compressed, anterior side rounded, posterior obliquely truncated, slightly winged at the upper part, plicately wrinkled at the umboes; fulvous straw-colour, smooth, or finely striated.

Unio Sayii, Ward (not of Tappan).

Hab. ——?

Of a peculiar pale-fulvous straw-colour, the epidermis being thin and nearly smooth.

Species 122. (Mus. Cuming.)

UNIO LUTULENTUS. *Un. testâ subquadrato-oblongâ, valde compressâ, latere antico modicè rotundato, postico declivi-expanso, deinde truncato, concentricè rudè plicato-striatâ; nigrâ.*

THE MUDDY UNIO. Shell somewhat squarely oblong, very compressed, anterior side moderately rounded, posterior slopingly expanded, then truncated, concentrically rudely plicately striated; black.

GOULD, Pro. Nat. Hist. Soc. Boston, U.S. 1850, vol. vii. p. 292.

Hab. New Zealand.

Of a peculiarly compressed form, with somewhat of the general aspect of a *Glycimeris*.

Species 123. (Mus. Cuming.)

UNIO PICTORUM. *Un. testâ elongato-oblongâ, latere antico rotundato, postico modicè declivi, subacuminato; fulvo-olivaceâ.*

THE PAINTERS' UNIO. Shell elongately oblong, anterior side rounded, posterior moderately sloping, somewhat acuminated; fulvous-olive.

Mya pictorum, Linnæus, Syst. Nat. 10th edit. p. 671.
Unio pictorum, Philippson.
Unio rostrata, Lamarck.
Mysca pictorum, Turton.
Unio limosus, Nilsson.
Unio Turtoni, Payraudeau.
Unio Requieni, Michaud.
Unio Deshayesii, Michaud.
Unio longirostris, Ziegler.
Unio Ardusianus, Reniés.
Unio ponderosus, Spitzi.
Unio Aleronii, Companyo and Masson.
Unio dactylus, Morelet.
Unio mucidus, Morelet.
Unio Philippi, Dupuy.
Unio platyrinchoides, Dupuy.
Unio Roussii, Dupuy.
Unio curvirostris, Dupuy.

Hab. Europe. Siberia. North Africa.

Of a characteristic fulvous-olive colour and elongated form, very generally distributed throughout Europe, Siberia, and North Africa.

Species 124. (Mus. Cuming.)

UNIO TUMIDUS. *Un. testâ ovato-cuneiformi, gibboso-tumidâ, latere antico rotundato, postico declivè obtusè angulato, deinde acuminato, umbonibus plicato-corrugatis; olivaceâ, viridi pallidè radiatâ.*

THE SWOLLEN UNIO. Shell ovately wedge-shaped, gibbously swollen, anterior side rounded, posterior slopingly obtusely angled, then acuminated, umboes plicately wrinkled; olive, faintly rayed with green.

PHILIPPSON, Nov. Test. Gen. p. 17.

Unio ovalis, Philippson.
Mya ovalis, Pulteney.
Mya depressa, Donovan.
Mya ovata, Donovan.
Unio rostratus, Studer.
Mysca ovata, Turton.
Mysca solida, Turton.
Unio inflatus, Hécart.
Unio Michaudianus, Desmoulins.
Unio arcuatus, Bouchard-Chantereux.

Hab. Northern and Central Europe.

Distinguished from the preceding species by its broader and more swollen form, by the umboes being plicately wrinkled, and by its rayed painting. Its geographical distribution is moreover different, being confined to Northern and Central Europe.

Species 125. (Mus. Cuming.)

UNIO VERECUNDUS. *Un. testâ ovatâ, tenniculâ, latere antico rotundato, postico obliquè tumido, supernè subalato; fulvo-æruginosâ, viridi fasciatâ.*

THE MODEST UNIO. Shell ovate, rather thin, anterior side rounded, posterior obliquely swollen, slightly winged at the upper part; fulvous-bronze, banded with green.

GOULD, Pro. Nat. Hist. Soc. Boston, U.S. vol. iii. p. 292.

Hab. Manila, Island of Luzon, Philippines.

Of a simple *Anodon*-like form and peculiar bronze hue of colour.

126.

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132.

Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XXVI.

Species 126. (Mus. Cuming.)

UNIO INGALLSIANUS. *Un. testâ subelongato-ovatâ, gibbosiusculâ, anticè rotundatâ, posticè declivè angulato-acuminatâ, lævigatâ; intensè viridi.*

INGALLS' UNIO. Shell somewhat elongately ovate, rather gibbous, anteriorly rounded, posteriorly slopingly angularly acuminated, smooth; dark green.

LEA, Trans. Amer. Phil. Soc. 1852; Obs. vol. v. p. 38. pl. 24. f. 41.

Hab. Siam; Dr. Ingalls.

An interesting posteriorly acuminated type, of a dark shining green colour.

Species 127. (Mus. Cuming.)

UNIO INCRASSATUS. *Un. testâ oblongo-securiformi, crassiusculâ, gibbosâ, anticè declivi-rotundatâ, posticè latè gibboso-angulatâ, areâ posticâ decussatim corrugatâ; nigricante-brunneâ.*

THE THICKENED UNIO. Shell oblong wedge-shaped, rather thick, gibbous, anteriorly slopingly rounded, posteriorly broadly gibbously angled, posterior area decussately wrinkled; dark-brown.

LEA, Trans. Amer. Phil. Soc. 1840; Obs. vol. iii. p. 55. pl. 16. f. 34.

Hab. Georgia, North America.

Of a peculiar broadly angled wedge-shape, the surface on the posterior area being cross-wrinkled.

Species 128. (Mus. Cuming.)

UNIO CONCESTATOR. *Un. testâ elliptico-ovatâ, gibbosiusculâ, rudè concentricè striatâ, anticè contractè rotundatâ, posticè sublatè expansâ; fulvo-olivaceâ, viridi radiatâ.*

THE ELLIPTIC UNIO. Shell elliptically ovate, rather gibbous, rudely concentrically striated, anteriorly contractedly rounded, posteriorly rather broadly expanded; fulvous-olive, rayed with green.

LEA, Pro. Acad. Nat. Sci. Philad. 1857, p. 31; Obs. vol. vi. p. 67. pl. 12. f. 48.

Hab. Georgia, North America.

Of rather simple character, rounded in a contracted manner on the interior side, while on the posterior it is rather broadly expanded.

Species 129. (Mus. Cuming.)

UNIO OBTUSUS. *Un. testâ oblongo-ovatâ, subelliptică, gibbosâ, lævigatâ, anticè subquadrato-rotundatâ, posticè gibboso-declivi, obscurè lirato-radiatâ; fulvo-olivaceâ.*

THE OBTUSE UNIO. Shell oblong-ovate, slightly elliptic, gibbous, smooth, anteriorly somewhat squarely rounded, posteriorly gibbously sloping, obscurely ridge-rayed; fulvous-olive.

LEA, Trans. Amer. Phil. Soc. 1840; Obs. vol. iii. p. 39. pl. 11. f. 13.

Hab. Georgia, North America.

Partaking somewhat of the form of the preceding species, with the posterior side less expanded, gibbous, and obscurely rayed with ridges.

Species 130. (Mus. Cuming.)

UNIO BI-CÆLATUS. *Un. testâ oblongo-ovatâ, subcompressâ, rudè concentricè striatâ, latere antico conspicuè compressè rotundato, postico obliquè declivi, umbonibus nitidissimè radiatim et concentricè sulcatis; livido-fulvâ, olivaceo-viridi posticè radiatâ.*

THE DOUBLY-CARVED UNIO. Shell oblong-ovate, rather compressed, rudely concentrically striated, anterior side conspicuously compressly rounded, posteriorly obliquely sloping, umboes very neatly radiately and concentrically grooved; livid fulvous, posteriorly rayed with olive-green.

Hab. ——?

A very characteristic species, unlike any American type with which I am acquainted, having the umboes very neatly decussately carved, somewhat after the manner of *Castalia*.

Species 131. (Mus. Cuming.)

UNIO FLAVIDENS. *Un. testâ trigono-securiformi, crassâ, umbonibus prominulis, latere antico brevissimo, rotundato, postico trigono-acuminato; nigricante-brunneâ.*

THE YELLOW-TOOTHED UNIO. Shell triangularly wedge-shaped, thick, with the umboes prominent, anterior side very short, rounded, posterior triangularly acuminated, very dark brown.

BENSON, MS. in Mus. Cuming.

Hab. Bengal.

A solid wedge-shaped shell, very triangular in form, with the umboes rather prominent.

Species 132. (Mus. Cuming.)

UNIO EGYPTIACUS. *Un. testâ transversim ovatâ, tenuiculâ, concentricè rudè striatâ, latere antico compressè producto, deinde rotundato, postico etiam compressè producto, latiusculo, gibboso; fulvo-olivaceâ, nigricante-brunneo fasciatâ.*

THE EGYPTIAN UNIO. Shell transversely ovate, rather thin, concentrically rudely striated, anterior side compressly produced, then rounded, posterior side also compressly produced, rather broad, gibbous; fulvous-olive, banded with dark-brown.

CAILLIAUD, Voy. à Meroë, vol. ii. pl. 61. f. 6, 7.

Hab. River Nile, Egypt; Cailliaud.

The chief peculiarity of this species is its produced compression on either side of the umboes along the hinge margin.

133.

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139.

Sowerby, del et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XXVII.

Species 133. (Mus. Cuming.)

UNIO SOLIDUS. *Un. testâ elliptico-cordatâ, solidâ, umbonibus prominentibus, latere antico brevissimo, postico declivè obscurè angulato; atrâ.*

THE SOLID UNIO. Shell elliptically heart-shaped, solid, umboes prominent, anterior side very short, posterior slopingly obscurely angled; black.

LEA, Trans. Amer. Phil. Soc. 1834; Obs. vol. ii. p. 13. pl. 5. f. 13.

Hab. Ohio River, at Cincinnati, North America.

Of an oblique elliptic heart-shape, black externally, clear and silvery within.

Species 134. (Mus. Cuming.)

UNIO LENS. *Un. testâ transversè ovatâ, subæquilaterali, lateribus rotundatis, superiè compressè productis, postico prope umbones obtusè angulato; livido-olivaceâ, sericeâ.*

THE LENS UNIO. Shell transversely ovate, somewhat equilateral, sides rounded, compressly produced at the upper part, the posterior obtusely angled near the umboes; livid-olive, silky.

LEA, Trans. Amer. Phil. Soc. 1830; Obs. vol. i. p. 90. pl. 8. f. 10.

Hab. Ohio, North America.

Rather more than usually equilateral, the sides being compressly produced along the hinge margin.

Species 135. (Mus. Cuming.)

UNIO CIRCULUS. *Un. testâ elliptico-cordatâ, subcirculari, solidâ, umbonibus compressè tumidis, lateribus brevibus, postico prope umbones obtusè angulato; fusco-olivaceâ, nigricante tinctâ.*

THE ORB UNIO. Shell elliptically heart-shaped, nearly circular, solid, umboes compressly swollen, sides short, the posterior obtusely angled near the umboes; fuscous-olive, tinged with black.

LEA, Trans. Amer. Phil. Soc. 1829; Obs. vol. i. p. 47. pl. 9. f. 14.

Hab. Ohio and Tennessee, North America.

Of a more circular form than *U. solidus*, but inclined to be similarly obliquely elliptical.

Species 136. (Mus. Cuming.)

UNIO RUBIGINOSUS. *Un. testâ subquadrato-oblongâ, securiformi, compressâ, umbonibus corrugatis, latere antico rotundato, postico arcuato-truncato, flexuoso-angulato; rubiginoso-fulvâ.*

THE RUDDY UNIO. Shell somewhat squarely oblong, wedge-like, compressed, umboes wrinkled, anterior side round, posterior arcuately truncated, flexuously angled; ruddy-fulvous.

LEA, Trans. Amer. Phil. Soc. 1829; Obs. vol. i. p. 41. pl. 8. f. 10.

Unio flavus, Conrad.

Unio cerinus, Conrad.

Hab. Ohio, North America.

A compressed wedge-like shell, of a peculiar ruddy-fulvous colour.

Species 137. (Mus. Cuming.)

UNIO SUBROTUNDUS. *Un. testâ oblongo-ovatâ, valde inæquilaterali, latere antico brevissimo, postico obliquè producto, gradatim attenuato; atrâ.*

THE NEARLY ROUND UNIO. Shell oblong-ovate, very inequilateral, anterior side very short, posterior obliquely produced, gradually attenuated; black.

LEA, Trans. Amer. Phil. Soc. 1830; Obs. vol. i. p. 127. pl. 18. f. 45.

Unio politus?, Say.

Unio brevialis, Crouch.

Hab. Ohio, North America.

The posterior side of this species is peculiarly gradually attenuated.

Species 138. (Mus. Cuming.)

UNIO PILARIS. *Un. testâ obliquè cordatâ, solidissimâ, umbonibus tumidis, prominentibus, lateribus brevissimis, postico obscurè angulato, subtruncato; olivaceo-nigrâ.*

THE HAIRY UNIO. Shell obliquely heart-shaped, very solid, umboes swollen, prominent, sides very short, posterior obscurely angled, slightly truncated; olive-black.

LEA, Trans. Amer. Phil. Soc. 1840; Obs. vol. iii. p. 47.

Hab. Tennessee, North America.

This species is mostly covered towards the posterior angle with a hairy epidermis.

Species 139. (Mus. Cuming.)

UNIO RADIATUS. *Un. testâ oblongâ, subcompressâ, latere antico rotundato, postico obliquè producto, subobscurè angulato, declivi-truncato; fulvo-olivaceâ, intensè viridi multiradiatâ.*

THE RAYED UNIO. Shell oblong, rather compressed, anterior side rounded, posterior side obliquely produced, rather obscurely angled, slopingly truncated fulvous-olive, many-rayed with dark green.

Mya radiata, Gmelin, Syst. Nat. p. 3220.

Unio radiata, Lamarck.

Mya elongata, Wood.

Unio Virginiana, Lea.

Hab. Lake George, North America.

A prettily-rayed species of an oblong form, somewhat squarely truncated on the posterior side.

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146.

Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XXVIII.

Species 140. (Mus. Cuming.)

UNIO MENKIANUS. *Un. testâ oblongâ, compressiusculâ, umbonibus corrugatis, latere antico brevi, rotundato, postico subquadrato-producto, rotundato; lutescente, pallidè viridi radiatâ.*

MENKE'S UNIO. Shell oblong, rather compressed, umboes wrinkled, anterior side short, rounded, posterior somewhat squarely produced, rounded, yellowish; rayed with pale green.

LEA, Trans. Amer. Phil. Soc. 1836; Obs. vol. ii. p. 76. pl. 19. f. 59.

Hab. Tennessee, North America.

Of a characteristic yellowish tone of colour, the green rays being correspondingly bright.

Species 141. (Mus. Cuming.)

UNIO DIMINUTUS. *Un. testâ subangustè ovatâ, compressâ, undique peculiariter crispato-corrugatâ, latere antico declivi-rotundato, postico subattenuato, supernè obscurè flexuoso-angulato; ustulato-fulvâ.*

THE SMALL UNIO. Shell rather narrowly ovate, compressed, everywhere peculiarly crisply wrinkled, anterior side slopingly rounded, posterior slightly attenuated, obscurely flexuously angled at the upper part; burnt-fulvous colour.

LEA, Pro. Acad. Nat. Sci. Phil. 1859, p. 151; Obs. vol. viii. p. 72. pl. 39. f. 134.

Hab. East Africa.

A very distinct form of *Unio*, in which the surface is peculiarly crisply wrinkled throughout.

Species 142. (Mus. Cuming.)

UNIO SUMATRENSIS. *Un. testâ subtrigono-oblongâ, tenuiculâ, undique tenuè crispato-corrugatâ, latere antico attenuato-rotundato, postico declivi-truncato, gradatim latiore, obscurè tumido-angulato; fulvescente-olivaceâ.*

THE SUMATRA UNIO. Shell somewhat triangularly oblong, rather thin, finely crisply wrinkled throughout, anterior side attenuately rounded, posterior slopingly truncated, gradually broader, obscurely tumidly angled; fulvous-olive.

LEA, Pro. Acad. Nat. Sci. 1859, p. 153; Obs. vol. vii. p. 57. pl. 34. f. 118.

Hab. Sumatra.

The sculpture of this species resembles that of the preceding in some measure, but it is much less prominently developed.

Species 143. (Mus. Cuming.)

UNIO APLATUS. *Un. testâ ovato-oblongâ, modicè convexâ, lævigatâ, valde inæquilaterali, latere antico attenuato-rotundato, postico subtruncato-rotundatâ; piceâ.*

THE FLATTENED UNIO. Shell ovately oblong, moderately convex, smooth, very inequilateral, anterior side attenuately-rounded, posteriorly slightly truncately-rounded; pitch-black.

SWAINSON, MS. in Mus. Cuming.

Hab. Island of Chiloe, Chili; Cuming.

A species of simple character, with somewhat of the general external aspect of a *Glycimeris*.

Species 144. (Mus. Cuming.)

UNIO NITENS. *Un. testâ elliptico-oblongâ, medio subcompressâ, concentricè rudè striatâ, latere antico declivi-rotundato, postico arcuatim truncato-angulato; fusco-olivaceâ.*

THE SHINING UNIO. Shell elliptically oblong, slightly compressed in the middle, concentrically rudely striated, anterior side slopingly rounded, posterior arcuately truncately angled; fuscous-olive.

LEA, Trans. Amer. Phil. Soc. 1840; Obs. vol. iii. p. 43. pl. 12. f. 19.

Hab. Tennessee, North America.

Distinguished by an arcuate flexuous angulation of the upper posterior side.

Species 145. (Mus. Cuming.)

UNIO MERDIGER. *Un. testâ ovato-oblongâ, gibboso-convexâ, medio subcompressâ, concentricè rudè striatâ, lateribus rotundatis, postico obscurè truncato-angulato; piceâ.*

THE MUD UNIO. Shell ovately oblong, gibbously convex, faintly compressed in the middle, concentrically rudely striated, sides rounded, posterior obscurely truncately angled; pitch-black.

WATTS, Jay's Cat. Shells, p. 25, no. 1065.

Hab. Hungary.

A rather swollen species, obscurely-truncately angled on the posterior side, covered with a pitch-black epidermis.

Species 146. (Mus. Cuming.)

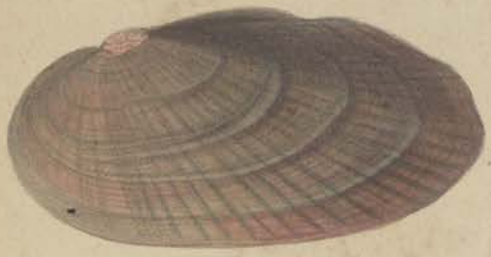
UNIO GUBERNACULUM. *Un. testâ latè securiformi, compresso-planâ, rudè concentricè rugatâ et obscurè verrucatâ, latere antico brevissimo, attenuato-rotundato, postico perampliter expanso; vividè olivaceo-viridi.*

THE RUDDER UNIO. Shell broadly wedge-shaped, compressly flattened, rudely concentrically wrinkled and obscurely warted, anterior side very short, attenuately rounded, posterior very largely expanded; bright olive-green.

Hab. ——?

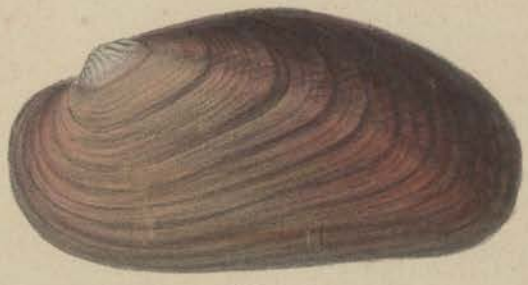
A form of *Unio* in which the posterior side is singularly flatly expanded.

147.

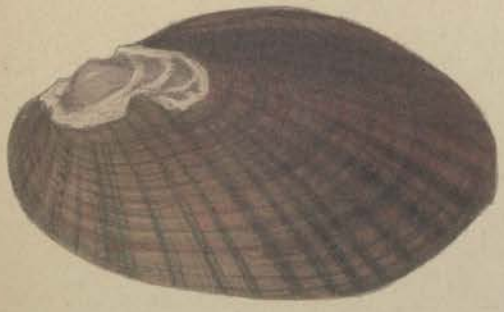


148.

149.



150.



151.

152.

153.

Sowerby, del. et. lith.

Vincent Brooks Imp.

UNIO.

PLATE XXIX.

Species 147. (Mus. Cuming.)

UNIO INORNATUS. *Un. testâ oblongo-ovatâ, subnaviculari, tenui, gibbosiusculâ, latere antico compressè attenuato, brevi, rotundato, postico declivè flexuoso-angulato, supernè concavo, radiato; fulvo-olivaceâ, livido-viridi tinctâ.*

THE UNADORNED UNIO. Shell oblong-ovate, somewhat boat-shaped, thin, rather gibbous, anterior side compressly attenuated, short, rounded, posterior slopingly flexuously angled, concaved and rayed at the upper part; fulvous-olive, tinged with livid green.

HANLEY, MS. in Mus. Cuming.

Hab. Cambojia; Mouhot.

A distinct and very characteristic type, collected by the late M. Mouhot in Cambojia.

Species 148. (Mus. Cuming.)

UNIO IRIS. *Un. testâ subelongato-oblongâ, compressiusculâ, concentricè striatâ, umbonibus corrugatis, latere antico brevi, rotundato, postico valde producto, obscurè truncato-angulato; fulvo-olivaceâ, viridi radiatâ et fasciatâ.*

THE RAINBOW UNIO. Shell rather elongately oblong, somewhat compressed, concentrically striated, umboes wrinkled, anterior side short, rounded, posterior much produced, obscurely truncately angled; fulvous-olive, rayed and banded with green.

LEA, Trans. Amer. Phil. Soc. 1829; Obs. vol. i. p. 53. pl. 11. f. 18.

Unio nebulosus, Conrad.

Hab. Ohio.

A prettily-painted species, rather elongately produced on the posterior side.

Species 149. (Mus. Cuming.)

UNIO CONTRADENS. *Un. testâ elliptico-oblongâ, lævigatâ, latere antico brevissimo, attenuato-rotundato, postico ampliter flexuoso-angulato, declivi-truncato; fulvo-olivacco, posticè nigricante-viridi tinctâ.*

THE OPPOSITE-TOOTHED UNIO. Shell elliptically oblong, smooth, anterior side very short, attenuately rounded, posterior largely flexuously angled, slopingly truncated, fulvous-olive, stained posteriorly with dark green.

LEA, Trans. Amer. Phil. Soc. 1836; Obs. vol. ii. p. 75. pl. 18. f. 58.

Hab. River Mezherdeh, Tunis.

A shell of light substance, partaking in some measure of the form of *Modiola*.

Species 150. (Mus. Cuming.)

UNIO AURATUS. *Un. testâ arcuatim elongatâ, versus marginem ventralem compressâ, latere antico brevissimo, rotundato, postico valde producto, arcuatim rotundato, vix angulato; fulvo-olivaceâ, æreo tinctâ.*

THE GOLDEN UNIO. Shell arcuately elongated, compressed towards the ventral margin, anterior side very short, rounded, posterior much produced, arcuately rounded, scarcely angled; fulvous-olive, tinged with bronze.

SWAINSON, MS. in Mus. Cuming.

Unio depressus, Lesson.

Unio Chiloensis, Philippi.

Unio Gassiesii, Philippi.

Hab. Island of Chiloe, Chili; Cuming.

Of a peculiar golden or rather bronze hue.

Species 151. (Mus. Cuming.)

UNIO OBLIQUIRADIATUS. *Un. testâ oblongo-ovatâ, subobliquâ, latere antico brevissimo, attenuato-rotundato, postico latiore, deinde subattenuato-rotundato, vix angulato; fusco-olivaceâ, viridi multiradiatâ.*

THE OBLIQUELY-RAYED UNIO. Shell oblong-ovate, rather oblique, anterior side very short, attenuately rounded, posterior broader, then somewhat attenuately rounded, scarcely angled; fuscous-olive, many-rayed with green.

Hab. ——?

Of an oblique form, with the anterior side peculiarly attenuately reduced.

Species 152. (Mus. Cuming.)

UNIO MENZIESIANUS. *Un. testâ obliquè ovatâ, tenuicula,*

compressâ, lævigatâ vel tenuè concentricè striatâ, latere antico brevissimo, attenuato-rotundato, postico latiore, deinde declivè acuminato-rotundato, obscurè angulato; nigricante-olivaceâ.

MENZIES' UNIO. Shell obliquely ovate, rather thin, compressed, smooth, or finely concentrically striated, anterior side very short, attenuately rounded, posterior side broader, then slopingly acuminately rounded, obscurely-angled, blackish-olive.

GRAY, MS. in Mus. Brit.

Hab. New Zealand.

A rather smooth, flatly compressed species of rather light substance.

Species 153. (Mus. Cuming.)

UNIO DEMBEÆ. *Un. testâ elongato-oblongâ, gibbosâ, latere antico rotundato, postico subacuminato-producto, obscurè angulato; fulvo-olivaceâ, viridi tinctâ et radiatâ.*

THE DEMBEA UNIO. Shell elongately oblong, gibbous, anterior side rounded, posterior rather acuminately produced, obscurely angled, fulvous-olive, tinged and rayed with green.

ROSSMÄSSLER, MS. in Mus. Cuming.

Hab. Dembea, Abyssinia.

This comes very near to the European *U. pictorum*, and may be only a variety of that species.

154.

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Sowerby, del et lith.

Vincent Brooks, Imp

UNIO.

PLATE XXX.

Species 154. (Mus. Cuming.)

UNIO PLATYRHYNCHUS. *Un. testâ cylindraceo-elongatâ, latere antico brevissimo, postico valde producto, prope umbones angulato, deinde compressè truncato-rostrato; ustulato-fuscâ, olivaceo tinctâ.*

THE BROAD-SNOUTED UNIO. Shell cylindrically elongated, anterior side very short, posterior much produced, angled near the umboes, then compressly truncately beaked; burnt-brown, tinged with olive.

ROSSMASSLER, Icon. f. 130.

Unio lithophagus, Zeigler.

Unio teretiusculus, Philippi.

Hab. Carinthia.

Curiously elongately beaked on the posterior side, and having somewhat of the general aspect of a *Lithodomus*.

Species 155. (Mus. Cuming.)

UNIO FRAGILIS. *Un. testâ oblongo-ovatâ, subobliquâ, tenui, plano-compressâ, densè minutè concentricè filo-striatâ, umbonibus conspicuè radiatim corrugato-liratis, lateribus rotundatis, postico multo majore, latiore, obscurè obtusè angulato; sordidè olivaceo-virente.*

THE FRAGILE UNIO. Shell oblong-ovate, rather oblique, thin, flatly compressed, densely minutely concentrically thread-striated, umboes conspicuously radiately wrinkle-ridged, sides rounded, posterior much the larger and broader, obscurely obtusely angled; dull olive-green.

SWAINSON, MS. in Mus. Cuming.

Hab. Island of Chiloe, Chili; Cuming.

An extremely characteristic type, distinct in all respects from any North American species.

Species 156. (Mus. Cuming.)

UNIO AUCKLANDICUS. *Un. testâ oblongo-ovatâ, tenui, compressâ, concentricè densè filo-striatâ, umbonibus radiatim corrugato-liratis, lateribus rotundatis, antico brevissimo, postico obscurè convexo-angulato; nigricante-olivaceâ.*

THE AUCKLAND UNIO. Shell oblong-ovate, thin, compressed, concentrically densely thread-striated, umboes radiately wrinkle-ridged, sides rounded, anterior very short, posterior obscurely convexly angled; blackish-olive.

GRAY, MS. in Mus. Brit.

Hab. Auckland, New Zealand.

This species belongs to the same peculiar type as the preceding; yet, according to the habitats recorded in Mr. Cuming's cabinet, they are from singularly remote localities.

Species 157. (Mus. Cuming.)

UNIO CARINTHIACUS. *Un. testâ ovato-oblongâ, crassiusculâ, gibboso-convexâ, latere antico concentricè filo-striato, brevi, rotundato, postico subacuminato-rotundato, vix angulato; fulvo-olivaceâ.*

THE CARINTHIAN UNIO. Shell ovately oblong, rather thick, gibbously convex, anterior side concentrically thread-striated, short, rounded, posterior somewhat acuminately rounded, scarcely angled; fulvous-olive.

Hab. Carinthia.

Of a very regular convex form, conspicuously thread-striated on the anterior side.

Species 158. (Mus. Cuming.)

UNIO NASHVILLIANUS. *Un. testâ oblongo-ovatâ, posticè subtrigonâ, tenui, compressiusculâ, latere antico brevi, rotundato, postico declivè subacuminato-angulato, supernè subalato; olivaceo-viridi, interdum viridi radiatâ.*

THE NASHVILLE UNIO. Shell oblong-ovate, posteriorly somewhat triangular, thin, rather compressed, anterior side short, rounded, posterior slopingly somewhat acuminately angled, slightly winged at the upper part; olive-green, sometimes rayed with green.

LEA, Trans. Amer. Phil. Soc. 1834; Obs. vol. i. p. 212. pl. 14. f. 43.

Hab. Ohio, North America.

Chiefly distinguished by the posterior side being rather acuminately angled, with the upper margin slightly winged.

Species 159. (Mus. Cuming.)

UNIO FULIGO. *Un. testâ oblongo-ovatâ, crassâ, rudè concentricè striatâ; latere antico brevi, attenuato-rotundato, postico latiore, subexpanso, vix angulato, obscurè radiato; piceâ.*

THE SOOT UNIO. Shell oblong-ovate, thick, rudely concentrically striated, anterior side short, attenuately rounded, posterior broader, somewhat expanded, scarcely angled, obscurely rayed; pitch-black.

Hab. —— ?

Of this species I have no information, and have entirely failed in identifying it with any hitherto described.

Species 160. (Mus. Cuming.)

UNIO ÆREUS. *Un. testâ subtrigono-oblongâ, Modioliformi, rudè concentricè striatâ, latere antico brevissimo, attenuato-rotundato, postico latè expanso, prope umbones conspicuè gibboso-angulato; sordidè brunneâ, æreo tinctâ.*

THE BRAZEN UNIO. Shell somewhat triangularly oblong, *Modiola*-shaped, rudely concentrically striated, anterior side very short, attenuately rounded, posterior broadly expanded, conspicuously gibbously angled near the umboes; dull brown, tinged with bronze.

Hab. —— ?

Another very peculiar species, of a rich bronze hue, shaped like a *Modiola*.

161.

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164.

Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XXXI.

Species 161.

UNIO SPLENDIDUS. *Un. testâ elliptică, inflatâ, intus lilaceâ, anticè angustâ, rotundâ, posticè latâ, angulatâ, margine dorsali elevato, epidermide luteo, fasciis viridibus numerosis radiatâ, umbonibus inflatis, lævibus.*

THE SPLENDID UNIO. Shell elliptical, inflated, lilac within, narrow and rounded in front, wide and angulated at the back, with the dorsal margin elevated, epidermis yellowish, radiated with green stripes, umboes inflated, smooth.

LEA, Unio ii. p. 70. t. 19. f. 61.

Hab. Georgia.

A remarkably inflated, oval shell, with a splendid lilac-coloured interior.

Species 162.

UNIO ORNATUS. *Un. testâ subcuneatâ, inflatâ, luteâ, nonnunquam radiis angustis, interruptis, punctatis ornatâ, anticè brevi, subrotundâ, posticè longiusculâ, elevatâ, validè angulatâ, post angulum magnum trifariam subangulato, intus pallidè roseo-lutescente, margine ventrali posticè inflato, umbonibus inflatis subrugatis.*

THE ORNAMENTED UNIO. Shell rather wedge-shaped, inflated, yellowish, sometimes ornamented with narrow, interrupted, spotted rays, short, rather rounded in front, longer at the back, elevated and strongly angulated, with three slight angles behind the large one, pale salmon-coloured within, ventral margin inflated behind, umboes inflated, slightly rugose.

CONRAD, Freshwater Shells.

Hab. Alabama.

Species 163.

UNIO SUBOVATUS. *Un. testâ elliptică, inflatâ, tenui, intus albâ, extus pallidè olivaceâ, strigis viridibus angustis radiatâ, anticè brevi, angustatâ, posticè valdè inflatâ, obliquè angulatâ, margine postico dorsali subdeclivi, ventrali rotundo, areâ postangulari parvâ, umbonibus undulatim rugosis.*

THE SUBOVATE UNIO. Shell elliptical, inflated, thin, white within, pale-olive without, radiated with narrow green stripes, short and narrow in front, inflated and obliquely angulated at the back, posterior dorsal margin sloping, ventral rounded, post-angular area small, umboes undulately rugose.

LEA, Unio i. p. 128. t. 18. f. 46.

Hab. Ohio.

Although an oval shell, in some degree resembling *U. splendidus*, it will be observed that this shell is much lighter, the posterior dorsal margin is more sloping, and the area behind the angle much smaller. Although named *subovatus*, it is more oval than *U. ovatus*.

Species 164.

UNIO OVATUS. *Un. subcuneatâ, inflatâ, intus roseo-lutescente, extuso livaceâ, lineis et fasciis viridibus radiatâ, latere antico brevi, profundè rugato, latere postico lato, longiusculo, nigrescente, elevatim angulato, areâ posticâ trigonâ, umbonibus subrugatis.*

THE OVATE UNIO. Shell rather wedge-shaped, salmon-tinted within, olive without, rayed with green lines and bands, anterior side short, deeply grooved, posterior side rather longer, inclining to black, with an elevated angle, posterior area trigonal, umboes slightly rugose.

SAY, Ency. Amer.

Hab. Ohio.

By no means an oval species as compared with many others, but rather cuneate, with a large posterior angle.

165.

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169.

Sowerby del. et lith.

Vincent Brooks Imp.

UNIO.

PLATE XXXII.

Species 165. (Mus. Cuming.)

UNIO NEGATUS. *Un. testâ subquadratâ, transversè sulcatâ, compressâ, subæquilaterali, intus albâ vel subrosaceâ, anticè breviusculâ, rotundâ, posticè angulatâ, post angulum planâ, ante angulum paululum excavatâ, umbonibus rugulosis.*

THE UNACKNOWLEDGED UNIO. Shell subquadrate, transversely sulcated, compressed, subequilateral white or slightly rose-tinted within, rather short, rounded in front, angulated at the back, flat behind the angle, slightly excavated in front of the angle, umboes rugose.

LEA, Unio viii. p. 80. pl. ix. f. 225.

Hab. Big Prairie Creek, Alabama; E. R. Showalter. Columbus; Miss Spillman.

Dr. Lea states the difference between this species and his *U. rubiginosus* to be, that in the latter the wrinkles on the region of the umboes are numerous and spread, while those of the former are confined to two or three on the posterior side.

Species 166. (Mus. Cuming.)

UNIO LIENOSUS. *Un. testâ inflatâ, subelongato-ovali, sulcatâ, intus roseo-purpurascente, extus fuscâ, obscurè radiatâ, latere antico brevi, rotundo, medio subdepresso, margine subexcavato, latere postico inflato, obscurè triangulato, margine terminali acuminato.*

THE SWOLLEN UNIO. Shell inflated, subelongately-oval, sulcated, purplish-rose within, brown, obscurely radiated without, anterior side short, round, slightly depressed in the centre and excavated at the margin, hinder side inflated, obscurely triangulated, with the terminal margin pointed.

CONRAD, in Silliman's Journal, vol. xxv. t. 1. f. 4.

Hab. River Alabama.

Of an elongate, oval form, equally inflated throughout.

Species 167. (Mus. Cuming.)

UNIO SHUTTLEWORTHI. *Un. testâ elongato-subtrapezoideâ, intus purpurascente, extus validè ruguloso-sulcatâ, anticè brevi, angustâ, rotundâ, posticè elongatâ, latâ, rotundatim subangulatâ, margine ventrali rectiusculo, margine dorsali posticè elevato, subalato, margine terminali obliquo, medio subexcavato.*

SHUTTLEWORTH'S UNIO. Shell elongately-subtrapezoidal, purplish within, strongly rugosely sulcated without, anterior narrow, short, round, posterior elongated, broad, roundly subangular, ventral margin rather straight, dorsal margin elevated, and subalate posteriorly, terminal margin oblique, subexcavated in the middle.

LEA, Unio vi. p. 24. pl. xxix. f. 19.

Hab. Australia; Shuttleworth.

Having externally much the form and appearance of *Iridina Nilotica*.

Species 168. (Mus. Cuming.)

UNIO POLITUS. *Un. testâ obliquè ovatâ, crassâ, intus albâ, extus fusco-lutescente, distanter sulcatâ, anticè brevissimâ, margine dorsali angulato, posticè obliquè elongatâ, subdilatatâ, complanatâ, obscurè biangulatâ, margine dorsali declivi.*

THE POLISHED UNIO. Shell obliquely-ovate, thick, white within, yellowish-brown, and distantly sulcated without, very short in front, with the dorsal margin angulated, obliquely elongated at the back, slightly dilated and flattened, obscurely biangulated, with the dorsal margin sloping.

SAY.

Hab. River Ohio.

A remarkably oblique species, with very short front.

Species 169. (Mus. Cuming.)

UNIO BURROUGHIANUS. *Un. testâ ovali-oblongâ, obliquâ, solidâ, concentricè irregulariter sulcatâ, intus albâ, extus epidermide viridi nigrescente, ad umbones et versus medium obliquè angulatim et divaricatim rugatâ, latere antico brevi, subrotundo, latere postico elongato,*

obliquè angulato, ad terminum producto, acuminato, margine ventrali ad medium convexo, margine dorsali paulo declivi.

BURROUGH'S UNIO. Shell oval-oblong, oblique, solid, concentrically irregularly sulcated, white within, blackish green epidermis without, obliquely angularly and divergently ridged at the umboes and towards the middle, anterior side short, rather round, posterior side elongated, obliquely angulated, produced and acuminated at the extremity, ventral margin convex in the middle, dorsal margin a little sloping.

LEA, Trans. Amer. Phil. vol. v. t. 10. f. 27.

Hab. River Panama, South America.

The strong coarse A and V shaped wrinkles covering the umbonal region, and reaching to near the middle of the shell, are strongly characteristic of this species.

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174.

Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XXXIII.

Species 170. (Mus. Cuming.)

UNIO UMBROSUS. *Un. testâ ellipticâ, subinflatâ, obliquâ, lævigatâ, intus purpureâ, extus obscurè fusco-olivaceâ, anticè brevi, rotundâ, posticè elongatâ, obscurissimè biangulatâ, margine dorsali rotundatim elevato, margine postico-laterali versus angulum posticum declivi.*

THE SHADOWY UNIO. Shell elliptical, subinflated, oblique, smooth, purple within, obscurely olive-brown without, short and round in front, lengthened and very obscurely biangulated at the back, dorsal margin roundly elevated, postico-lateral margin sloping towards the posterior angle.

LEA, Unio vi. pl. xxx. f. 26.

Hab. The Medellin River, Mexico; Dr. Burrough.

This smoothly elliptical shell presents no striking characteristics, but is named from the dark colour of the epidermis, which is probably accidental in the specimens described.

Species 171.

UNIO MEDELLINUS. *Un. testâ subtrapezoideâ, oblongâ, subcompressâ, intus purpureâ, extus lævigatâ, fusco-olivaceâ, posticè nigrescente, viridi obscurè radiatâ, latere antico breviusculo, angusto, medio ad marginem subcontracto, latere postico oblongo, obscurè biangulato, margine subelevato, versus angulum posticum declivi, inter angulos truncato.*

THE MEDELLIN UNIO. Shell somewhat trapezoidal, oblong, subcompressed, purple within, smooth without, olive-brown, dark and obscurely radiated with green behind, anterior side rather short and narrow, middle rather contracted at the margin, posterior side oblong, obscurely biangulated, margin somewhat raised, sloping towards the posterior angle, and truncated between the angles.

LEA, Unio ii. p. 39. pl. xii. fig. 34.

Hab. River Medellin, near Vera Cruz; Dr. Burrough.

Species 172. (Mus. Cuming.)

UNIO HEMBELI. *Un. testâ oblongâ, subellipticâ, intus pallidâ, extus leviter concentricè sulcatâ, nigrâ, et posticè prope umbones et versus medium tuberculis obliquis divergentibus obscurè rugatâ, latere antico brevi, subrotundo, medio subcomplanato, latere postico elongato, obscurè prope marginem dorsalem angulato, areâ post angulum angustâ, declivi, margine terminali subacuminato.*

HEMBEL'S UNIO. Shell oblong, subelliptical, pale within, lightly concentrically sulcated, and black without, obscurely wrinkled with oblique diverging tubercles behind, near the umboes and towards the middle, anterior side short, rather rounded, middle slightly flattened, posterior side elongated, obscurely angulated near the dorsal margin, area behind the angle narrow, sloping, terminal margin rather acuminated.

CONRAD, Mon. U. p. 23. t. 51.

Hab. Louisiana.

Not unlike our British *U. margaritifera*, but the ventral margin is not contracted in the middle, and the diverging tubercles placed obliquely on the hinder slope are sufficient to distinguish the shell.

Species 173. (Mus. Cuming.)

UNIO LECONTIANUS. *Un. testâ elliptico-subtruncatâ, crassâ, inflatâ, intus aurantiâ, extus olivaceo-fuscâ, lævigatâ, latere antico brevi, rotundo, latere postico oblongo, inflato, lato, obscurissimè triangulato, margine dorsali subelevato, margine terminali obliquè subtruncato.*

LECONTE'S UNIO. Shell elliptic-subtruncate, thick, inflated, orange within, olive-brown without, smooth, anterior side short, rounded, posterior side oblong, inflated, wide, very obscurely triangular, dorsal margin slightly raised, terminal margin obliquely subtruncate.

LEA, Unio ii. p. 40. pl. xii. f. 35.

Hab. River Georgia; Major Leconte.

A much more tumid and truncate shell than *U. umbrosus*.

Species 174. (Mus. Cuming.)

UNIO SUCCISUS. *Un. testâ subquadratâ, transversè sulcatâ, compressâ, intus pallidè roseâ, extus fusco-nigres-*

cente, latere antico brevi, amplo, supernè subangulato, latere postico oblongo, subtruncato, angulato, margine dorsali declivi, margine terminali obliquè truncato, ad angulum acuminato, margine ventrali ante angulum excavato.

THE CUT UNIO. Shell rather square, transversely sulcated, compressed, pale-rose within, brown-blackish without, anterior side short, full, with a slight angle above, posterior side oblong, subtruncate, angular, dorsal margin sloping, terminal margin obliquely truncated, acuminated at the angle, ventral margin excavated in front of the angle.

LEA, Unio v. p. 31. pl. xxi. f. 32.

Hab. West Florida; Major Leconte.

Deeper, darker, less compressed and less excavated at the ventral margin than *U. negatus*.

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Sowerby, del. et lith.

Vincent Brooks Imp.

UNIO.

PLATE XXXIV.

Species 175. (Mus. Cuming.)

UNIO BUCKLEYI. *Un. testâ subovatâ, subcompressâ, lævigatâ, intus luteo-rubescente, extus nigrescente, latere antico brevi, subrotundo, latere postico producto, perobliquè truncato, biangulato, margine ventrali medio inflato, versus angulum posticum leviter excavato, margine terminali inter angulos truncato.*

BUCKLEY'S UNIO. Shell subovate, subcompressed, smooth, reddish-yellow within, blackish without, anterior side short, rather round, posterior side produced, very obliquely truncated, biangulated, ventral margin inflated in the middle, and lightly excavated towards the posterior angle, terminal margin truncated between the angles.

LEA, Unio iv. p. 34. pl. xxxix. f. 2.

Hab. Lake George and Lake Munroe, Florida; S. B. Buckley.

A very neat, obliquely-truncated species.

Species 176. (Mus. Cuming.)

UNIO DISCREPANS. *Un. testâ oblongâ, valde compressâ, anticè sulcatâ, posticè lævigatâ, intus albâ, extus luteo-viridescente, lineatim radiatâ, latere antico brevi, subrotundo, latere postico elongato, obscurè biangulato, inter angulos truncato, margine dorsali rectiusculo, margine laterali declivi, margine ventrali recto.*

THE DISCREPANT UNIO. Shell oblong, much compressed, sulcated in front, smooth at the back, white within, yellowish-green without, rayed with lines, anterior side short, rather round, posterior side elongate, obscurely biangulated, truncated between the angles, dorsal margin rather straight, lateral margin sloping, ventral margin straight.

LEA, Unio viii. p. 22. pl. lv. f. 165.

Hab. North Alabama; Prof. Tuomey.

A very compressed, oblong, small species.

Species 177. (Mus. Cuming.)

UNIO INVOLUTA. *Un. testâ ovali, subæquilaterali, inflatâ, tenui, lævigatâ, intus albâ-iridescente, extus viridi, anticè subrotundo, posticè producto acuminato, umbonibus inflatis, tuberculiferis.*

THE INVOLUTE UNIO. Shell oval, subequilateral, inflated, thin, smooth, iridescent-white within, green without, rounded in front, produced and acuminated posteriorly, umboes inflated, tuberculated.

BENSON, MS. Hanley, Bivalve Shells App. p. 384. t. xxiii. f. 20.

Hab. Assam.

Very light, bright-green, ventricose and acuminated at the end.

Species 178. (Mus. Cuming.)

UNIO COARCTATUS. *Un. testâ oblongâ, trapezoideâ, compressâ, angustâ, solidâ, lævigatâ, intus pallidè aurantiâ seu purpureâ, extus olivaceâ-nigricante, latere antico brevi, rotundo, latere postico elongato, obliquè angulato, post angulum depresso insulcato, umbonibus rugatis.*

THE STRAIGHTENED UNIO. Shell oblong, trapezoidal, compressed, narrow, solid, smooth, within pale-orange or purple, without blackish-olive, anterior side short, rounded, posterior side elongated, obliquely angulated, with a groove behind the angle, umboes wrinkled.

LAMARCK, Anim. sans vert.

U. complanatus, Lea, etc.

Hab. United States.

The synonymy of this species has been much confused with that of Lea's *Symphynota complanata*.

Species 179. (Mus. Cuming.)

UNIO UMBRANS. *Un. testâ subellipticâ, subventricosâ, subæquilaterali, irregulariter rugatâ, intus purpureâ, extus olivaceâ-nigrescenti, latere antico breviusculo, angusto, rotundo, latere postico obscurè angulato, ad marginem terminalem subacuminato, margine ventrali valde inflato.*

THE DARKENING UNIO. Shell subelliptical, subventricose, subequilateral, irregularly-ridged, purple within, blackish-olive without, anterior side rather short, narrow, round, posterior side obscurely angulated,

rather pointed at the terminal margin, ventral margin much inflated.

LEA, Unio vi. p. 72. pl. xiii. f. 53.

Hab. Othcalooga Creek, Gordon County, Georgia; Bishop Elliot.

Species 180. (Mus. Cuming.)

UNIO BARNESIANUS. *Un. oblongo-subquadratâ, compressâ, lævigatâ, intus purpurascente, extus luteo-olivaceâ, latere antico brevissimo, subtruncato, latere postico elongato, obliquè truncato, obscurè angulato, margine dorsali declivi.*

BARNES's UNIO. Shell oblong-subquadrate, compressed, smooth, purplish within, yellowish-olive without, anterior side short, subtruncate, posterior side elongated, obliquely truncated, obscurely angulated, dorsal margin sloping.

LEA, Unio ii. p. 31. pl. x. f. 26.

Hab. Cumberland River, Tennessee; Dr. Troost.

A remarkably flat little shell.

Species 181. (Mus. Cuming.)

UNIO REGULARIS. *Un. testâ subelliptică, inflatâ, tenui, intus purpureâ, extus lævigatâ, obscurè olivaceâ, radiatâ, latere antico angusto, brevi, subrotundo, medio inflato, margine convexo, latere postico elevato, biangulato, inter angulos truncato, margine postico dorsali et laterali declivi.*

THE REGULAR UNIO. Shell subelliptical, inflated, thin, purple within, smooth, dark-olive, radiated without, anterior side narrow, short, rather round, inflated in the centre, with the margin convex, posterior side elevated, biangular, truncated between the angles, posterior dorsal and lateral margin sloped.

LEA, Unio iii. p. 81. pl. xxv. f. 59.

Hab. French Broad River, East Tennessee; Dr. Troost.

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Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XXXV.

Species 182.

UNIO MICANS. *Un. testâ oblongo-subelliptică, subcompressâ, lævigatâ, nitente, solidâ, intus roseo-lutescente, extus fuscâ, sparsim viridi radiatâ, latere antico brevi, rotundo, latere postico elongato, angulato, angulo ad terminum acuminato, margine dorsali rectiusculo, brevi, margine laterali perobliquo.*

THE SHINING UNIO. Shell oblong-subelliptical, subcompressed, smooth, shining, solid, salmon-coloured within, brown without, sparingly radiated with green, anterior side short, round, posterior side elongated, angulated, angle acuminated at the end, dorsal margin rather straight, short, lateral margin very oblique.

LEA, Unio viii. p. 63. pl. iii. f. 207.

Hab. Catawba River; Wheatley. Deep River Gulf; Emmons.

Species 183. (Mus. Cuming.)

UNIO PELLUCIDUS. *Un. testâ subovatâ, tenui, inflatâ, intus purpureâ, extus leviter sulcatâ, fuscâ-viridescente, viridi radiatâ, latere antico brevi, rotundo, angusto, latere postico lato, inflato, ad terminum truncato, margine dorsali elevato, subalato, margine ventrali ad medium paulo contracto.*

THE PELLUCID UNIO. Shell subovate, thin, inflated, purple within, lightly sulcated, greenish-brown without, radiated with green, anterior side short, round, narrow, posterior side wide, inflated, truncated at the end, dorsal margin elevated, subalated, ventral margin a little contracted in the middle.

LEA, Unio iv. p. 44. pl. ii. f. 6.

Hab. Chatahoochee River, Georgia.

Curiously inflated at the posterior side.

Species 184. (Mus. Cuming.)

UNIO HETERODON. *Un. testâ subtrapezoideâ, tenui, subinflatâ, intus albâ, extus viridi, concentricè leviter sulcatâ, latere antico breviusculo, supernè recto, angulato, ad terminum rotundo, latere postico obtusè angulato, post angulum bisulcato, ad terminum acuminato, margine dorsali rectiusculo, margine laterali perobliquo, umbonibus tuberculatis, cardine intus dente cardinali duplicato.*

THE DOUBLE-TOOTHED UNIO. Shell subtrapezoidal, thin, somewhat inflated, white within, green without, lightly concentrically grooved, anterior side rather short, straight above, angulated, rounded at the end, posterior side obtusely angulated, with two grooves behind the angle, acuminated at the end, dorsal margin rather straight, lateral margin very oblique, umboes tuberculated, inside of hinge with a double cardinal tooth.

LEA, Unio i. p. 42. pl. viii. f. 11.

Hab. Georgia.

This rather wedge-shaped shell is lighter, more inflated, and shorter than *U. micans*. The cardinal tooth in the *left* valve is divided near the centre.

Species 185. (Mus. Cuming.)

UNIO CONFERTUS. *Un. testâ oblongâ, crassâ, tumidâ, intus carneâ, extus olivaceâ-nigrescenti, latere antico brevi, rotundo, latere postico obscurè biangulato, inter angulos truncato, margine dorsali subdeclivi, margine laterali obliquo, margine ventrali rectiusculo.*

THE COMPACT UNIO. Shell oblong, thick, tumid, flesh-coloured within, blackish-olive without, anterior side short, round, posterior side obscurely biangulated, truncated between the angles, dorsal margin slightly sloping, lateral margin oblique, ventral margin nearly straight.

LEA, Trans. Amer. Phil. Soc. vol. v. t. 16. f. 47.

Hab. South Carolina.

A rather straight, oblong shell, covered with a blackish epidermis.

Species 186. (Mus. Cuming.)

UNIO PARVUS. *Un. testâ ovali, tenui, subinflatâ, intus albâ, extus viridi, lævigatâ, latere antico brevi, rotundo, medio vix contracto, latere postico oblongo, subinflato, ad terminum acuminato, obscurè biangulato, umbonibus subconcentricè undulatis.*

THE SMALL UNIO. Shell oval, thin, rather inflated, white within, green, smooth without, anterior side short, round, very slightly contracted in the centre, posterior side oblong, rather inflated, somewhat acuminated at the end, obscurely biangulated, umboes subconcentrically undulated.

BARNES, Silliman's Journal, vol. vi.

Hab. Fox River, North America.

The ridges near the umboes are nearly, but not quite, concentric, or coincident with the lines of growth.

Species 187. (Mus. Cuming.)

UNIO BLANDINGIANUS. *Un. testâ oblongâ, solidâ, intus purpurascente, extus lævigatâ, olivaceo-fuscâ, latere antico brevissimo, rotundo, angusto, medio subcontracto, latere postico elongato, latiusculo, subobliquè truncato, obscurè biangulato, post angulum obscurè bicostato.*

BLANDING'S UNIO. Shell oblong, solid, purple within, smooth, olive-brown without, anterior side very short, round, narrow, middle slightly contracted, posterior side elongated, rather broader, rather obliquely truncated, obscurely biangulated, behind the angle obscurely two-ribbed.

LEA, Trans. Amer. Phil. Soc. vol. v. t. 15. f. 44.

Hab. Florida.

Species 188. (Mus. Cuming.)

UNIO HASLEHURSTIANUS. *Un. testâ angustâ, elongatâ, compressâ, solidâ, intus purpureâ, extus nigrâ, latere antico brevissimo, rotundo, medio subcontracto, latere postico obscurè triangulato, ad terminum truncato, margine dorsali arcuato.*

HASLEHURST'S UNIO. Shell narrow, elongated, compressed, solid, purple within, black without, anterior side very short, round, middle slightly contracted, posterior side obscurely triangulated, truncated at the end, dorsal margin arched.

LEA, Unio vii. p. 29. pl. 26. f. 92.

Hab. Satilla River, Camden county, Georgia; C. T. Downie.

A long, narrow shell, with a slightly-arched appearance and thick black epidermis.

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Sowerby, del et lith.

Vincent, Brooks, Imp.

UNIO.

PLATE XXXVI.

Species 189. (Mus. Cuming.)

UNIO ACUTISSIMUS. *Un. testâ parvâ, elongatâ, compressâ, tenui, intus lutescente, extus subviridi, latere antico brevi, rotundâ, angustâ, latere postico elongato, obliquè angulato, ante et post angulum rugis divergentibus sculpto, termine acuto.*

THE VERY SHARP UNIO. Shell elongate, small, compressed, thin, yellowish within, rather green without, anterior side short, round, narrow, posterior side long, obliquely angulated, before and behind the angle sculptured with diverging wrinkles, end acute.

LEA, Unio i. p. 99. pl. x. f. 18.

Hab. Alabama River.

The peculiar characteristic of this little shell consists in the divergent wrinkles, reaching to the margin on both sides of the posterior angle.

Species 190.

UNIO GLANS. *Un. testâ ovatâ, crassâ, tumidâ, parvâ, intus purpureâ, extus lævigatâ, obscurè olivaceâ, latere antico brevi, rotundo, latere postico longiusculo, obscurè biangulato, inter angulos truncato, margine dorsali subdeclivi, margine laterali obliquo, umbonibus amplis.*

THE ACORN UNIO. Shell ovate, thick, tumid, small, purple within, smooth, obscurely-olive without, anterior side short, round, posterior side rather long, obscurely biangulated, truncated between the angles, dorsal margin slightly sloping, lateral margin oblique, umboes full.

LEA, Unio i. p. 92. pl. viii. f. 12.

Hab. River Ohio.

Suitably named from its resemblance to an acorn in shape and colour.

Species 191. (Mus. Cuming.)

UNIO ZEIGLERIANUS. *Un. testâ parvâ, tenuissimâ, pellucidâ, ovali, subcompressâ, intus albescente, extus lævigatâ, luteâ, lineis viridibus posticè radiatâ, latere antico brevi, rotundo, latere postico oblongo, latiusculo, termine rotundo, margine laterali supra obliquo.*

ZEIGLER'S UNIO. Shell small, very thin, pellucid, oval, rather compressed, whitish within, smooth, yellow, radiated with green lines without, anterior side short, round, posterior side oblong, rather broad, end rounded, lateral margin oblique above.

LEA, Unio ii. p. 32. pl. x. f. 6.

Hab. Cumberland River, Tennessee.

Species 192. (Mus. Cuming.)

UNIO HILDRETHIANUS. *Un. testâ elongatâ, subcylindricâ, tenui, intus iridescenti, extus obscurè olivaceâ, latere antico brevi, rotundo, latere postico elongato, subtruncato, marginibus dorsali et ventrali rectis, umbonibus undulatim rugosis.*

HILDRETH'S UNIO. Shell elongated, subcylindrical, thin, iridescent within, obscurely-olive without, anterior side short, round, posterior side lengthened, subtruncate, dorsal and ventral margins straight, umboes undulately wrinkled.

LEA, Trans. Amer. Phil. vol. v. t. 3. f. 8.

Hab. Ohio.

This is a light shell of remarkably cylindrical form.

Species 193. (Mus. Cuming.)

UNIO TORTIVUS. *Un. testâ oblongâ, compressâ, angustâ, tenui, intus cæruleâ et carneâ, extus viridi-nigrescenti, obscurè radiatâ, latere antico brevi, rotundo, latere postico elongato, latiusculo, obscurè biangulato, margine dorsali elevato, margine laterali perobliquo, termine truncato.*

THE PRESSED UNIO. Shell oblong, compressed, narrow, thin, bluish and flesh-coloured within, blackish-green, obscurely rayed without, anterior side short, round, posterior side elevated, lateral margin very oblique, truncated at the end.

LEA, Unio iii. p. 42. pl. xii. f. 17.

Hab. Chattahoochee River, Georgia.

Species 194. (Mus. Cuming.)

UNIO AHÆNEUS. *Un. testâ angustâ, elongatâ, obliquâ,*

compressâ, tenui, intus cupreâ, extus lævigatâ, olivaceâ, viridi radiatâ, latere antico brevi, rotundo, medio subcoarctato, latere postico latiusculo, perobliquè biangulato, inter angulos truncato, margine dorsali elevato, subalato.

THE COPPER UNIO. Shell narrow, elongated, oblique, depressed, thin, copper-coloured within, smooth, olive, radiated with green without, anterior side short, round, middle slightly contracted, posterior side rather broad, very obliquely biangulated, truncated between the angles; dorsal margin raised, subalate.

LEA, Unio iv. p. 38. pl. 41. f. 9.

Hab. Black Creek, Florida.

Remarkable for the coppery or bronzed colour of the interior.

Species 195. (Mus. Cuming.)

UNIO OLIVARIUS. *Un. testâ ovali, subdepressâ, tenuissimâ, intus albâ, extus tenuiter striatâ, pallidè viridi, latere antico breviusculo, rotundo, latere postico lato, subacuminato, margine postico-laterali obliquo, margine dorsali elevato, brevi.*

THE OLIVE-GREEN UNIO. Shell oval, rather depressed, very thin, white within, finely striated, pale-green without; anterior side rather short, round, posterior side broad, rather acuminated, postero-lateral margin sloping, dorsal margin elevated, short.

Hab. —— ?

Species 196. (Mus. Cuming.)

UNIO FABALIS. *Un. testâ subovali, depressâ, solidâ, intus albâ, extus lævigata, olivaceâ, viridi obscurè radiatâ, latere antico brevissimo, rotundo, medio subcontracto, latere postico attenuato, subacuminato, margine dorsali declivi.*

THE BEAN UNIO. Shell rather oval, depresssed, solid, white within, smooth, olive, obscurely rayed with green without, anterior side very short, round, middle rather contracted, posterior side attenuated, rather acuminated, dorsal margin sloping.

LEA, Unio i. p. 96. pl. x. f. 16.

Hab. Ohio River; Lea.

It is more compressed than *U. glans*, and it is rayed.

Species 197. (Mus. Cuming.)

UNIO CUMBERLANDICUS. *Un. testâ ovali, compressâ, tenui, intus cæruleo et carneo iridescenti, extus lævigatâ, subaurantiâ, viridi radiatâ, latere antico brevi, rotundo, latere postico latiusculo, oblongo, vix angulato, margine dorsali rectiusculo, margine postico-laterali subexcavato, umbonibus rugatis.*

THE CUMBERLAND UNIO. Shell oval, flat, thin, iridescent with blue and flesh-colour inside, smooth, orange-coloured and green-rayed outside, anterior side short, round, posterior side rather wide, oblong, hardly angulated, dorsal margin rather straight, posterior lateral margin slightly excavated, umboes wrinkled.

LEA, Unio ii. p. 25. pl. vii. f. 19.

Hab. Cumberland River.

Very beautifully covered with green rays on a bright-orange ground.

Species 198. (Mus. Cuming.)

UNIO PUMILUS. *Un. testâ parvâ, subquadratâ, tumidâ, intus albâ, extus olivaceâ, latere antico brevi, subdeclivi, angusto, latere postico quadrato, subangulato, marginibus dorsali et ventrali rectis, umbonum regione undatim rugatâ.*

THE DWARF UNIO. Shell small, rather square, tumid, white inside, olive without, anterior side short, rather sloping, narrow, posterior side square, rather angular, dorsal and ventral margins straight, region of the umboes wavily wrinkled.

LEA, Unio ii. p. 23. pl. vii. f. 17.

Hab. Black River, North Carolina.

A very curious little square shell.

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Sowerby del. et lith.

Vincent Brooks, Imp

UNIO.

PLATE XXXVII.

Species 199.

UNIO ANATICULUS. *Un. testâ obliquè ovatâ, brevi, crassâ, tumidâ, intus albâ, extus castaneâ, nigro concentricè fasciatâ, latere antico brevissimo, truncato, latere postico obliquè acuminato, angulato, ante angulum depresso, emarginato, areâ post angulum declivi, angustâ, margine ventrali medio inflato.*

THE LITTLE DUCK'S-BEAK UNIO. Shell obliquely-oval, short, thick, tumid, white inside, chestnut, concentrically banded with black outside, anterior side very short, truncated, posterior side obliquely acuminated, angular, in front of the angle depressed, emarginated, area behind the angle sloping, narrow, ventral margin swelled in the middle.

LEA, Unio viii. p. 96. pl. 13. f. 240.

Hab. Near Columbus, Mississippi.

Not unlike *U. curtus*, Lea, but that is a larger and heavier species, differently banded, and not quite so oblique.

Species 200. (Mus. Cuming.)

UNIO LENS. *Un. testâ rotundâ, crassâ, subcompressâ, subæquilaterali, intus albâ, extus pallidè olivaceâ, viridi subobscuratâ, latere antico breviusculo, medio tumido, latere postico latè truncato, margine dorsali declivi.*

THE LENS UNIO. Shell round, thick, rather compressed, nearly equilateral, white inside, pale-olive obscured with green without, anterior side rather short, middle tumid, posterior side widely truncated, dorsal margin sloping.

LEA, Unio, p. 90. pl. viii. f. 10.

Hab. River Ohio; Lea. Tennessee; Vanuxem.

A very well-named lenticular form.

Species 201. (Mus. Cuming.)

UNIO SUBROTUNDUS. *Un. testâ brevi, subrotundâ, compressâ, crassâ, intus albâ, extus fuscâ-lutescenti, viridi radiatâ, distanter sulcatâ, latere antico brevissimo, prope umbones angulato, ad latus declivi, margine ventrali rotundo, latere postico subobliquè truncato, biangulato, ante angulum primum depresso, areâ postangulari declivi, angustâ.*

THE SUBROTUND UNIO. Shell short, subrotund, compressed, thick, white inside, yellowish-brown, rayed with green outside, distantly sulcated, anterior side very short, angulated near the umboes, sloping at the side, ventral margin round, posterior side subobliquely truncated, biangulated, depressed in front of the first angle, area behind the angles sloping, narrow.

LEA, Trans. Amer. Phil. vol. iv. t. 18. f. 45.

Hab. West Africa.

Species 202. (Mus. Cuming.)

UNIO FOREMANIANUS. *Un. testâ trapezoideâ, oblongâ, angustâ, crassâ, intus albâ, extus fusco-lutescente, lævigatâ, fasciis et lineis interruptis viridibus radiatâ, latere antico breviusculo, supernè declivi, infrà rotundato, margine ventrali recto, latere postico elongato, tumido, truncato, biangulato, umbonibus elevatis, margine dorsali declivi.*

FOREMAN'S UNIO. Shell trapezoidal, oblong, narrow, thick, white inside, yellowish-green, smooth, rayed with interrupted green bands and lines outside, anterior side rather short, sloping above, rounded below, ventral margin straight, posterior side elongated, tumid, truncated, biangular, umboes elevated, dorsal margin sloping.

LEA, Unio iii. p. 85. pl. xxvii. f. 64.

Hab. Coosa River, Alabama.

Remarkable for its form, and for the hair-like rays of colour with which it is ornamented.

Species 203. (Mus. Cuming.)

UNIO HYDEANUS. *Un. testâ ovali, solidâ, inflatâ, intus albâ, extus luteâ, radiis viridibus subdivisis ornatâ, latere antico brevi, rotundo, versus umbones angulato, medio ad marginem leviter comtracto, latere postico elongato, tumido, subtruncato, umbonibus magnis, inflatis, lævibus.*

HYDE'S UNIO. Shell oval, solid, inflated, white within, yellow, ornamented with green, subdivided rays without, anterior side short, round, with an angle near the umboes, middle slightly contracted at the ventral

margin, posterior side long, tumid, rather truncated, umboes large, inflated, smooth.

LEA, Unio ii. p. 14. pl. vi. f. 14.

Hab. Teche River, Louisiana; W. M. Stewart.

A very full, plump shell, very beautifully rayed with green.

Species 204. (Mus. Cuming.)

UNIO ARGENTEUS. *Un. testâ subcuneatâ, perobliquâ, crassâ, compressâ, intus albâ, extus fusco-lutescente, posticè radiatim nigro-maculatâ, latere antico brevissimo, tumido, subtruncato, medio depresso, latere postico angulato, ad terminum acuminato, areâ postangulari angustâ, declivi.*

THE SILVERY UNIO. Shell somewhat wedge-shaped, very oblique, thick, compressed, white inside, yellowish-brown outside, rayed at the back with black spots, anterior side very short, tumid, slightly truncate, middle depressed, posterior side angulated, acuminated at the end, post-angular area narrow, sloping.

LEA, Unio iii. p. 80. pl. 25. f. 26.

Hab. Holston River, East Tennessee; Dr. Troost.

Dr. Lea observes that this species resembles *U. oviformis*, Conrad, but it is more compressed, and is of a much darker colour.

Species 205. (Mus. Cuming.)

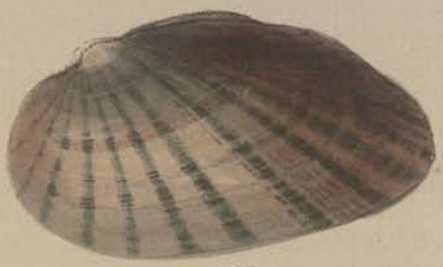
UNIO DOLABELLOIDES. *Un. testâ brevi, albâ, crassâ, cuneatâ, intus albâ, extus distanter sulcatâ, fuscâ, nigro radiatim maculatâ, latere antico brevissimo, subtruncato, tumido, margine ventrali rotundo, latere postico arcuatim biangulato, ante angulum primum depresso, ad terminum acuminato, areâ postangulari angustissimâ, declivi, umbonibus magnis, tumidis.*

THE HATCHET-SHAPED UNIO. Shell short, elevated, thick, wedge-shaped, white within, distantly sulcated, brown, rayed with black spots, anterior side very short, rather truncated, tumid, ventral margin round, posterior side with two arched angles, depressed in front of the first angle, acuminated at the end, post-angular area very narrow, sloping, umboes large, sloping, tumid.

LEA, Unio iii. p. 53. pl. xv. f. 31.

Hab. Holston River, Tennessee; S. N. Edgar.

This shell is one of the cuneate forms of the genus. It is marked with a single row of black spots on the tumid posterior ridge.



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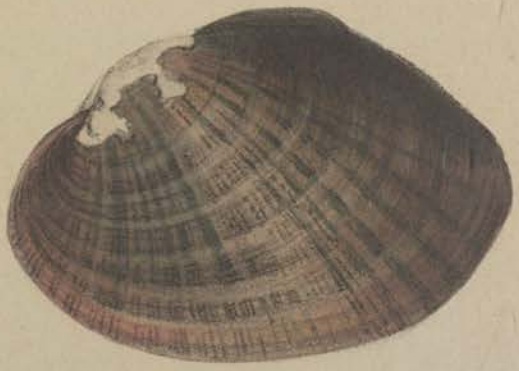

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Vincent Brooks Imp.

Sowerby del. et lith.

UNIO.

PLATE XXXVIII.

Species 206. (Mus. Cuming.)

UNIO NOVI-EBORACI. *Un. testâ ovali, compressâ, intus albâ, extus plamulatâ, luteâ, viridi interruptim radiatâ, latere antico brevi, rotundo, latere postico elongato, subattenuato, obscurè biangulato, ad terminum truncato, areâ postangulari angustâ, declivi, margine ventrali vix medio contracto.*

THE NEW YORK UNIO. Shell oval, compressed, white within, flattened, yellow without, with interrupted green rays, anterior side short, round, posterior side elongated, rather narrowed, obscurely biangulated, truncated at the end, post-angular area narrow, sloping, ventral margin very slightly contracted in the middle.

LEA, Unio ii. p. 104. pl. xxiv. f. 114.

Hab. Oak Orchard Creek, Orleans County, New York; J. C. Jay.

This shell has an oblong, flattened surface, beautifully ornamented with interrupted green rays. Umboes undated.

Species 207. (Mus. Cuming.)

UNIO MURCHISONIANUS. *Un. testâ ovali-oblongâ, subinflatâ, intus albâ, extus obscurè olivaceâ, ad umbonum regionem obliquè et undulatim rugatâ, rugis medio et infrà evanidis, posticè obliquè tuberculatâ, latere antico brevi, rotundo, prope umbones subangulato, latere postico oblongo, acuminato, angulato, post angulum obscurè bicostato.*

MURCHISON'S UNIO. Shell oval-oblong, rather inflated, white within, dull-olive without, at the region of the umboes obliquely and undulately wrinkled, wrinkles evanescent in the middle and beneath, posteriorly obliquely tuberculated, anterior side short, round, with a slight angle near the umboes, posterior side oblong, acuminated, angulated, behind the angle obscurely double-ribbed.

LEA, Trans. Amer. Phil. Soc. vol. v. t. 3. f. 6.

Hab. China.

The wrinkles, very beautifully arranged, which cover a large portion of the surface at and near the umboes, become faint towards the centre, and on the lower part of the shell.

Species 208. (Mus. Cuming.)

UNIO EXIGUUS. *Un. testâ oblongâ, obliquâ, angustâ, tenui, subcompressâ, intus cæruleo-iridescenti, extus lævigatâ, anticè luteâ, posticè viridi, nigro obliquè radiatâ, latere antico brevissimo, rotundo, latere postico elongato, ad terminum subtruncato, margine dorsali arcuato, margine ventrali rectiusculo.*

THE NARROW UNIO. Shell oblong, oblique, narrow, thin, subcompressed, blue-iridescent within, smooth without, yellow in front, green behind, obliquely rayed with black, anterior side very short, round, posterior side elongated, subtruncated at the end, dorsal margin arched, ventral margin rather straight.

LEA, Unio iii. p. 29. pl. vii. f. 1.

Hab. Chatahochee River, Georgia.

A peculiarly-narrow, thin shell, light-coloured in front, dark at the back, and very obliquely rayed.

Species 209. (Mus. Cuming.)

UNIO PEROVALIS. *Un. testâ ovali, crassâ, inflatâ, intus albâ, extus leviter sulcatâ, olivaceo-lutescente, lineis punctatis et fasciis interruptis viridibus radiatâ, latere antico brevi, rotundo, medio amplo, latere postico oblongo, subacuminato, obscurè biangulato.*

THE VERY OVAL UNIO. Shell oval, thick, inflated, white within, lightly sulcated, yellowish-olive without, rayed with spotted lines and interrupted green bands, anterior side short, round, middle full, posterior side oblong, rather acuminated, obscurely biangulated.

CONRAD, New Freshwater Shells, p. 43. t. 2. f. 2.

Hab. River Alabama.

There is a peculiar punctured and interrupted appearance in the bands and lines which ornament this very oval shell.

Species 210. (Mus. Cuming.)

UNIO TROOSTENSIS. *Un. testâ breviter ovali, tenui, inflatâ, intus albâ, extus olivaceâ, latere antico breviusculo, angusto, rotundo, medio amplissimo, latere postico, latiusculo, obtusè truncato, margine dorsali recto, posticè elevato, margine ventrali rotundo, umbonibus inflatis, tuberculatis.*

Troost's Unio. Shell shortly oval, thin, inflated, white within, olive without, anterior side rather short, narrow, round, middle very full, posterior side rather broad, obtusely truncated, dorsal margin straight, elevated at the back, ventral margin round, umboes inflated, tuberculated.

Lea, Trans. Amer. Phil. Soc. vol. v. t. 10. f. 30.

U. trabalis, Conrad.

Hab. North America.

So light and thin as to resemble an *Anodon*, but although the hinge is very thin, it has lateral teeth.

Species 211. (Mus. Cuming.)

Unio Muhlfeldianus. *Un. testâ oblongâ, subovali, compressâ, intus albâ et pallidè carneâ, extus fusco-olivaceâ, nigro radiatâ, concentricè sulcatâ, latere antico brevi, rotundo, medio complanato, margine ventrali contracto, latere postico subacuminato, areâ postero-dorsali obliquâ, compressâ, angustâ.*

Muhlfeld's Unio. Shell oblong, rather oval, compressed, white and pale flesh-coloured within, olive-brown without, rayed with black, concentrically grooved, anterior side short, round, middle flat, ventral margin contracted, posterior side subacuminated, postero-dorsal area oblique, compressed, narrow.

Lea, Trans. Amer. Phil. Soc. vol. vi. f. 6. p. 41.

Hab. Tennessee.

Species 210. (Mus. Cuming.)

Unio obesus. *Un. testâ oblongâ, rhomboideâ, subcompressâ, tenui, intus pallidè cupreâ, extus fuscâ, lævigatâ, latere antico brevi, subtruncato, latere postico oblongo, obscurè biangulato, areâ postangulari bisulcato, margine terminali obliquè subtruncato, margine dorsali paulo elevato, rectiusculo, margine ventrali recto.*

The obese Unio. Shell oblong, rhomboidal, rather compressed, thin, pale copper-coloured within, brown, smooth without, anterior side short, subtruncate, posterior side oblong, obscurely biangulated, post-angular area bisulcated, terminal margin obliquely subtruncated, dorsal margin slightly elevated, rather straight, ventral margin straight.

Lea, Unio i. p. 106. pl. xiii. f. 26.

Hab. York River.

213.

214.

215.

216.

217.

Sowerby, del et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XXXIX.

Species 213. (Mus. Cuming.)

UNIO ZICZAC. *Un. testâ ovatâ, lævi, subcompressâ, intus albido-subcæruleâ, extus obscurè olivaceâ, viridi radiatâ, radiis angulatim strigatis, latere antico brevi, lato, rotundo, medio paulo inflato, latere postico elongato subangulato, obliquè truncato, margine dorsali declivi.*

THE ZIGZAG UNIO. Shell ovate, smooth, subcompressed, bluish-white, obscurely olive without, rayed with green, rays angularly striped, anterior side short, wide, round, middle a little inflated, posterior side elongate, with a slight angle, obliquely truncated, dorsal margin sloping.

LEA, Unio, vol. i. p. 54. t. 12. f. 19.

Hab. South Carolina.

The zigzag markings upon the dull rays in this shell cause it to resemble *U. donaciformis*, but it is a flatter shell, and is not pointed or beaked at the end. It is obliquely truncated.

Species 214. (Mus. Cuming.)

UNIO DONACIFORMIS. *Un. testâ subovali, subinflatâ, intus albâ, extus lævigatâ, luteâ, olivaceo radiatâ, radiis angulatim strigatis, latere antico rotundo, breviusculo, medio inflato, latere postico cuneiformi, subrostrato, biangulato, margine superiori perobliquo.*

THE DONACIFORM UNIO. Shell suboval, somewhat inflated, white within, smooth, yellowish and olive-rayed without, rays angularly striped, anterior side rounded, rather short, middle inflated, posterior side cuneiform, subrostrated, biangulated, upper margin very oblique.

LEA, Unio, vol. i. p. 9. t. 4. f. 3.

Hab. River Ohio.

Marked with a pretty zigzag pattern, with the posterior side wedge-shaped,

Species 215. (Mus. Cuming.)

UNIO GRACILIS. *Un. testâ magnâ, inflatâ, tenui, subalatâ, lævigatâ, concentricè undulatâ, intus rosescenti, dentibus laminiformibus, extus luteâ, posticè unifasciatâ, latere antico brevi, subacuminato, angusto, medio subinflato, latere postico inflato, lato, elongato, termino subrotundo, margine dorsali elevato, cuneato.*

THE GRACEFUL UNIO. Shell large, inflated, thin, subalated, smooth, concentrically undulated, rose-tinted within, teeth laminiform, yellow without, with one band behind, anterior side short, subacuminated, narrow, middle slightly inflated, posterior side inflated, wide, elongate, the end rather round, dorsal margin elevated, cuneate.

BARNES, Silliman's American Journal of Science.

Unio fragilis, Swainson?

Hab. River Ohio.

A fine large shell, with the external appearance of an *Anodon*. It is of a delicate pinky tint within. The outer cuticle is generally of a light yellowish colour, with a dark-green band behind the posterior angle.

Species 216. (Mus. Cuming.)

UNIO VANUXEMENSIS. *Un. testâ oblongâ, solidâ, fusco-nigrescenti, intus purpureâ, latere antico brevi, rotundo, medio inflato, latere postico oblongo, biangulato, margine ventrali subconcavo, termino truncato, margine dorso-laterali declivi, margine dorsali rectiusculo.*

VANUXEM'S UNIO. Shell oblong, solid, blackish-brown, purple within, anterior side short, round, middle inflated, posterior side oblong, biangular, ventral margin slightly concave, the end truncated, dorso-lateral margin sloping, dorsal margin rather straight.

LEA, Unio, vol. ii. pl. 2. f. 31.

Hab. River Cumberland, Tennessee.

Species 217. (Mus. Cuming.)

UNIO STRAMINEUS. *Un. testâ ovali, subcompressâ, tenui, concentricè subliratâ, intus albâ, extus pallidè luteâ, posticè lineis viridis radiatâ, latere antico brevi, lato, subrotundo, medio inflato, latere postico elongato, margine dorsali elevato, cuneato, margine dorso-laterali declivi, termino truncato, margine postico-ventrali elevato.*

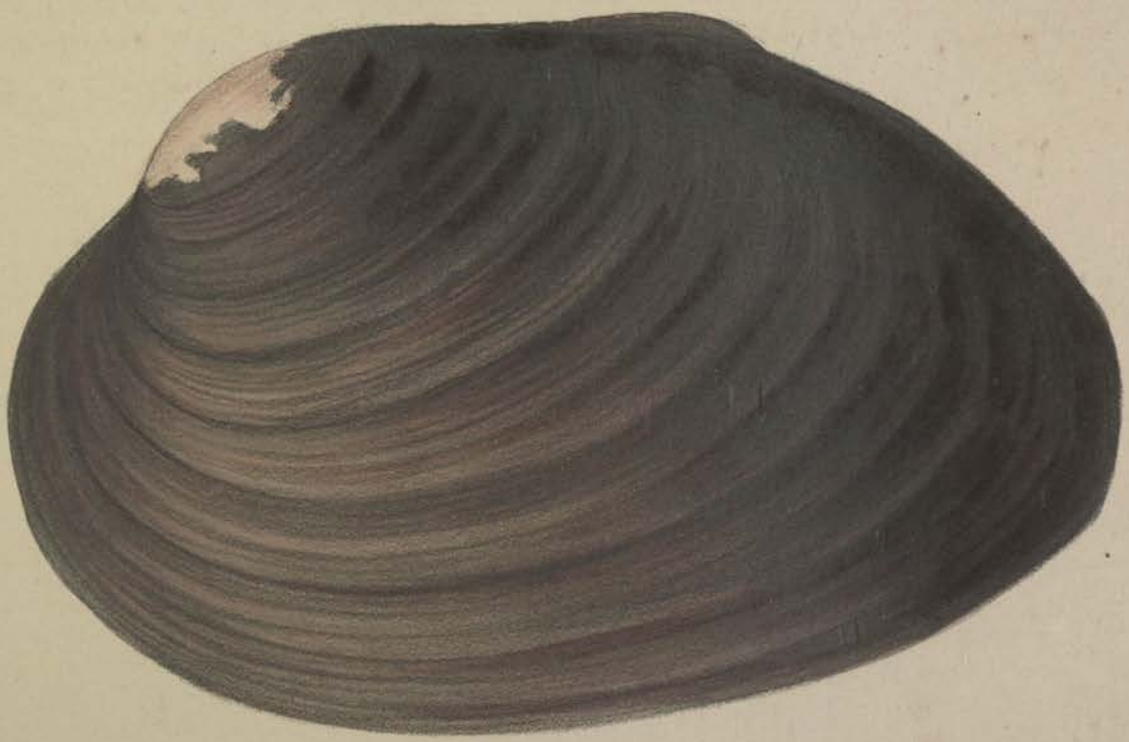
THE STRAW-COLOURED UNIO. Shell oval, rather compressed, thin, concentrically slightly wrinkled, white within, pale-yellowish without, radiated with green lines at the back, anterior side short, wide, roundish, inflated in the middle, posterior side long, dorsal margin elevated, cuneate, dorso-lateral margin sloping, the end truncated, postico-ventral margin raised.

CONRAD, Silliman's American Journal of Science.

Hab. River Alabama.

218.

219.



220.

221.

222.

Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XL.

Species 218. (Mus. Cuming.)

UNIO TEXASIANUS. *Un. testâ glandiformi, crassâ, intus albâ, extus nigrâ, latere antico brevissimo, rotundo, medio subinflato, latere postico elongato, ad terminum subtruncato, margine dorsali paulo arcuato.*

THE TEXAS UNIO. Shell glandiform, thick, white within, black without, anterior side very short, round, middle slightly inflated, posterior side elongate, slightly truncated at the end, dorsal margin a little arched.

LEA, Unio viii. p. 41, pl. 61. f. 184.

Hab. Devitt County, Texas; W. Newcomb, M.D.

Of an oblong, acorn shape, with a thick, dark epidermis.

Species 219. (Mus. Cuming.)

UNIO GIBBER. *Un. testâ subcrassâ, oblongâ, subquadratâ, latâ, posticè biangulatâ, intus cupreâ, latere antico brevissimo, subrotundo, margine ventrali rectiusculo, latere postico lato, oblongo, ad terminum truncato, margine dorsali elevato.*

THE GIBBOUS UNIO. Shell rather thick, oblong-squarish, posteriorly biangulated, copper-coloured within, anterior side wide, oblong, truncated at the end, dorsal margin elevated.

LEA, Unio ii. p. 35. t. 10. f. 30.

Hab. Carryfork River, Tennessee; Prof. Troost.

Species 220. (Mus. Cuming.)

UNIO CRASSUS. *Un. testâ magnâ, ovali, crassâ, ponderosâ, tumidâ, intus albâ, margaritaceâ, extus fusco-nigrescente, concentricè striato, latere antico brevi, rotundo, margine ventrali subinflato, latere postico oblongo, obscurè biangulato, margine dorsali prope umbones recti, tum declivi, umbonibus magnis rotundis.*

THE THICK UNIO. Shell large, oval, thick, ponderous, tumid, white and pearly within, blackish-brown, and concentrically striated without, anterior side short, round, ventral margin slightly inflated, posterior side oblong, obscurely biangular, dorsal margin straight near the umboes, and then sloping.

SAY, American Conchology.

Unio ligamentinum, Lamarck.

Unio ellipticus, Barnes.

Mya gravis, Wood.

Hab. North America.

Species 221. (Mus. Cuming.)

UNIO INFUCATUS. *Un. testâ subquadratâ, curtâ, latâ, crassâ, posticè angulatâ, intus albâ, extus nigrâ, prope umbones angulatim rugatâ, latere antico brevissimo, recto, latere postico quadrato, post angulum obliquè truncato, margine dorsali elevato, rectiusculo, angulo obliquè elevato.*

THE DARK-PAINTED UNIO. Shell subquadrate, short, wide, thick, posteriorly angular, white within, black without, angularly wrinkled near the umboes, anterior side very short, straight, posterior side square, obliquely truncated behind the angle, dorsal margin elevated, rather straight, angle obliquely elevated.

CONRAD, Shells of New South Wales, p. 45. tab. 18. f. 45.

Hab. Georgia, America.

Species 222. (Mus. Cuming.)

UNIO INDICUS. *Un. testâ obliquè subtrigonâ, brevi, altâ, tumidâ, intus pallidè rosco-lutescente, extus olivaceâ, distanter subsulcatâ, prope umbones angulatim rugatâ, latere antico brevi, declivi, margine ventrali rotundo, latere postico cuneato, angulato, umbonibus prominentibus.*

THE INDIAN UNIO. Shell obliquely subtrigonal, short, elevated, tumid, pale salmon-tinted within, olive, distantly subsulcated without, angularly wrinkled near the umboes, anterior side short, sloping, ventral margin rounded, posterior side wedge-shaped, angular, umboes prominent.

SOWERBY.

Hab. India.

A shell of remarkably triangular form, which does not appear to have been hitherto described.

223.

224a.

224b.

225.

226.

227.

228.

Sowerby, del.et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XLI.

Species 223. (Mus. Cuming.)

UNIO FIBULOIDES. *Un. testâ parvâ, subrotundâ, crassâ, lævigatâ, intus albâ, extus lutescente, latere antico brevissimo, rectiusculo, margine ventrali rotundo, latere postico obscurè angulato, marginibus dorsali et latero-dorsali arcuatis.*

THE BUTTON UNIO. Shell small, rather round, thick, smooth, white within, yellowish without, anterior side very short, rather straight, ventral margin rounded, posterior side obscurely angular, dorsal and latero-dorsal margins arched.

LEA, Unio vii. p. 37, pl. xxviii. f. 100.

Hab. Connasuaga River, Georgia.

Mr. Lea remarks of this interesting little species that it is more orbicular in form than either *U. nucleopsis* or *U. Trochelianus.*

Species 224. (Fig. *a*, *b*, Mus. Cuming.)

UNIO NYASSÆ. *Un. testâ obliquè cuneatâ, solidâ, posticè obliquè angulatâ, intus albâ, extus olivaceâ, nitente, medio et prope umbones minutè angulatim rugatâ, latere antico brevissimo, margine ventrali anticè inflato, posticè subconcavo, latere postico ad terminum acuminato, margine dorsali brevi, recto, margine dorso-laterali obliquo.*

THE NYASSA UNIO. Shell obliquely wedge-shaped, solid, posteriorly angular, white within, olive, shining without, with minute angular wrinkles in the middle and near the umboes, anterior side very short, ventral margin swelled in front, and slightly concave behind, posterior side acuminated at the end, dorsal margin short, straight, dorso-lateral margin oblique.

SOWERBY.

Hab. Lake Nyassa.

The several specimens of this shell in the collection of the late Mr. Cuming differ from each other in form, the two specimens figured being both more oblique than one remaining unfigured, and one of them being much more extensively wrinkled than the other.

Species 225. (Mus. Harrison.)

UNIO VALENTIANUS. *Un. testâ subcompressâ, oblongâ, crassâ, intus albâ, margaritaceâ, extus rugosâ, olivaceo-fuscâ, obscurè radiatâ, prope umbones undulatim rugatâ, latere antico brevi, subrotundo, tumido, margine ventrali anticè inflato, posticè excavato, latere postico angustato, depresso, ad terminum obscurè triangulato, margine dorsali declivi.*

THE VALENTIA UNIO. Shell rather compressed, oblong, thick, white and pearly within, rough, olive-brown, obscurely rayed without, wavily wrinkled near the umboes, anterior side short, rather rounded, tumid, ventral margin inflated in front, excavated behind, posterior side narrow, depressed, obscurely triangular at the end, dorsal margin sloping.

SOWERBY.

Hab. Valentia, Spain.

Several specimens of this species have been kindly communicated by A. Harrison, Esq.

Species 226. (Mus. Cuming.)

UNIO CAFFER. *Un. testâ angustâ, oblongâ, tenui, inflatâ, intus lutescente, extus sublævigatâ, sordidè olivaceâ, latere antico breviusculo, subrotundo, margine ventrali recto, vix medio contracto, latere postico oblongo, obscurissimè biangulato, margine dorsali recto, margine latero-dorsali subarcuatim declivi.*

THE CAFFER UNIO. Shell narrow, oblong, thin, inflated, yellowish within, rather smooth, dull-olive without, anterior side rather short, rather round, ventral margin straight, very slightly contracted in the middle, posterior side oblong, very obscurely biangular, dorsal margin straight, latero-dorsal margin rather arched, sloping.

KRAUSS, Sudaf. Moll. p. 18. t. i. f. 14.

Hab. Natal.

Species 227. (Mus. Cuming.)

UNIO BIGBYENSIS. *Un. testâ compressâ, latâ, solidâ, rectâ, intus albidâ, extus lævigatâ, luteâ, viridi radiatâ, latere antico brevissimo, declivi, margine ventrali paulo convexo, latere postico oblongo, subquadrato, ob-*

liquè angulato, subtruncato, margine dorsali subdeclivi, margine latero-dorsali curto, obliquo.

BIGBY'S UNIO. Shell compressed, wide, solid, straight, white within, smooth, yellowish, green-rayed without, anterior side very short, sloping, ventral margin a little concex, posterior side oblong, subquadrate, obliquely angular, subtruncated, dorsal margin slightly sloping, latero-dorsal margin short, oblique.

LEA, Unio, vol. iii. p. 75. pl. 22. f. 51.

Hab. Big Bigby Creek, Tennessee.

In some degree resembling *U. rubiginosus.*

Species 228. (Mus. Cuming.)

UNIO DOLOSUS. *Un. testâ subovatâ, inflatâ, tenui, intus pallidè purpureâ, extus sublævigatâ, olivaceâ, obscurè radiatâ, latere antico brevi, angustatâ, rotundâ, margine ventrali medio contracto, posticè inflato, latere postico inflato, lato, subtruncato, margine dorsali elevato, subalato, margine latero-dorsali declivi.*

THE SAD UNIO. Shell subovate, inflated, thin, pale purple within, smooth, olive, obscurely rayed without, anterior side short, narrow, rounded, posterior side inflated, wide, subtruncated, dorsal margin elevated, somewhat winged, latero-dorsal margin sloping.

LEA, Unio, vol. viii. p. 79. pl. xi. f. 224.

Hab. Alabama River.

229.

230.

231.

232.

233.a.

233.b.

234.

Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XLII.

Species 299. (Mus. Cuming.)

UNIO FLUCTIGER. *Un. testâ complanatâ, oblongâ, intus subcæruleâ, extus obscurè olivaceâ, striatâ, plicis angulatim convergentibus et divergentibus rugatâ, latere antico brevi, rotundo, margine ventrali medio paulo contracto, latere postico oblongo, ad terminum angulis duobus truncato, margine dorsali subarcuato, margine dorso-laterali declivi.*

THE RIPPLED UNIO. Shell flat, oblong, bluish within, obscurely olive without, striated, and wrinkled with zigzag plaits, anterior side short, round, ventral margin a little contracted in the middle, posterior side oblong, truncated with two angles at the end, dorsal margin slightly arched, dorso-lateral margin sloping.

LEA, Unio, vol. vii. p. 68. pl. xxxix. f. 130.

Hab. ——?

Although this species is published by Mr. Lea from Mr. Cuming's specimen as of unknown habitat, that author remarks that it appears to belong to South American types. He observes that it resembles his *U. scobinatus*, but is flatter, with a different style of plaits on the surface.

Species 230.

UNIO CÆRULEUS. *Un. testâ subovatâ, tenui, inflatâ, posticè obliquè biangulatâ, intus cæruleâ, extus leviter rugatâ, olivaceo-cærulescente, prope umbones obliquè rugis divaricatis decussatâ, latere antico brevi, obliquo, margine ventrali subinflato, posticè versus terminum elevato, latere postico obliquè oblongo, subacuminato.*

THE CÆRULEOUS UNIO. Shell subovate, thin, inflated, obscurely biangulated posteriorly, blue within, lightly wrinkled, bluish-olive without, near the umboes decussated with diverging plaits, anterior side short, oblique, ventral margin rather inflated, posteriorly raised towards the end, posterior side obliquely oblong, subacuminate.

LEA, Unio i. p. 105. t. 13. f. 25.

Hab. River Hoogly, Hindostan.

Species 231. (Mus. Cuming.)

UNIO CAMBOJENSIS. *Un. testâ ovatâ, tenui, intus roseo, cæruleo et luteo tinctâ, extus undulatim et angulatim crebrè rugatâ, latere antico subrotundo, brevi, margine ventrali subinflato, latere postico oblongo, ad terminum biangulato, margine dorsali recto, margine dorso-laterali valde declivi.*

THE CAMBOJA UNIO. Shell ovate, thin, rose tinctured with blue and yellow within, closely wrinkled with angular and undulating plaits outside, anterior side rather round, short, the ventral margin slightly inflated, posterior side oblong, biangular at the end, dorsal margin straight, dorso-lateral margin very sloping.

SOWERBY.

Hab. Camboja.

A pretty little shell, wrinkled all over, which does not appear very similar to any species hitherto described.

Species 232.

UNIO SWINHOFI. *Un. testâ latâ, oblongâ, inflatâ, tenui, intus albido-cærulescente, extus lævigatâ, obscurè olivaceo-nigricante, latere antico subrotundo, margine ventrali inflato, latere postico lato, margine dorsali elevato, margine dorso-laterali rectiusculo, umbonibus depressis.*

SWINHOE'S UNIO. Shell broad, oblong, inflated, thin, bluish-white within, smooth without, obscurely blackish-olive, anterior side rather rounded, ventral margin inflated, posterior side wide, dorsal margin elevated, dorso-lateral margin rather straight, umboes depressed.

REEVE, MS.

Hab. Camboja; Captain Swinhoe.

Species 233. (Fig. *a*, Mus. Cuming.)

UNIO CAMELOPARDALIS. *Un. testâ oblongâ, latâ, compressâ, posticè subangulatâ, obliquè truncatâ, intus albâ, crassâ, extus olivaceo-lutescente, maculis viridibus subquadratis, radiatim dispositis ornatâ, latere antico brevi, subangustâ, margine ventrali rectiusculo, posticè subinflato, latere postico lato, oblongo, margine dorsali elevato, subarcuato, posticè angulato, umbonibus parvis, compressis.*

THE CAMELOPARD UNIO. Shell oblong, wide, compressed, rather angular at the back, obliquely truncated, white, thick within, yellowish-olive without, ornamented with green squarish spots disposed in rays, anterior side short, rather narrow, ventral margin rather straight, inflated a little posteriorly, posterior side wide, oblong, dorsal margin elevated, slightly arched, with a posterior angle, umboes small, compressed.

LEA, Unio, vol. viii. p. 37. pl. lix. f. 180.

Hab. North Alabama; Prof. Tuomey.

Although this species is painted something in the manner of *U. pictus*, it is a very different shell, being more compressed, solid, and quadrate.

Species 233. (Fig. *b*.)

UNIO LINDSLEYI. *Un. testâ lævi, compressâ, solidâ, ellipticâ, latâ, posticè biangulatâ, intus albâ, extus olivaceo-lutescente, maculis viridibus subquadratis radiatim dispositis ornatâ, latere antico brevissimo, subangustato, latere postico oblongo, lato, prope angulum obliquè incrassato, margine ventrali inflato.*

LINDSLEY'S UNIO. Shell smooth, compressed, solid, elliptical, wide, posteriorly biangulated, white within, yellowish-olive without, ornamented with green squarish spots disposed in rays, anterior side very short, rather narrow, posterior side oblong, wide, obliquely thickened near the angle, ventral margin inflated.

LEA, Unio, vol. viii. p. 33. pl. lviii. f. 176.

Hab. Tennessee; President Lindsley.

The difference in outline between this and the preceding species is easily observable, and there is a peculiar thickness near the posterior slope.

Species 234.

UNIO BATAVUS. *Un. testâ tenui, inflatâ, valde inæquilaterali subflexuosâ, posticè obscurè biangulatâ, intus albo-cæruleseente, extus sordidè olivaceâ, ad umbones plicis subangulatis elevatis rugatâ, latere antico brevi, angusto, margine ventrali anticè subcontracto, posticè inflato, latere postico lato, margine dorsali elevato, rectiusculo.*

THE BATAVUS UNIO. Shell thin, inflated, very inequilateral, rather flexuous, posteriorly biangulated, bluish-white within, dull-olive without, wrinkled at the umboes with subangular, elevated plaits, anterior side short, narrow, ventral margin rather contracted in front, inflated posteriorly, posterior side wide, dorsal margin elevated, rather straight.

LAMARCK, Anim. sans vert. Unio xxxiii.

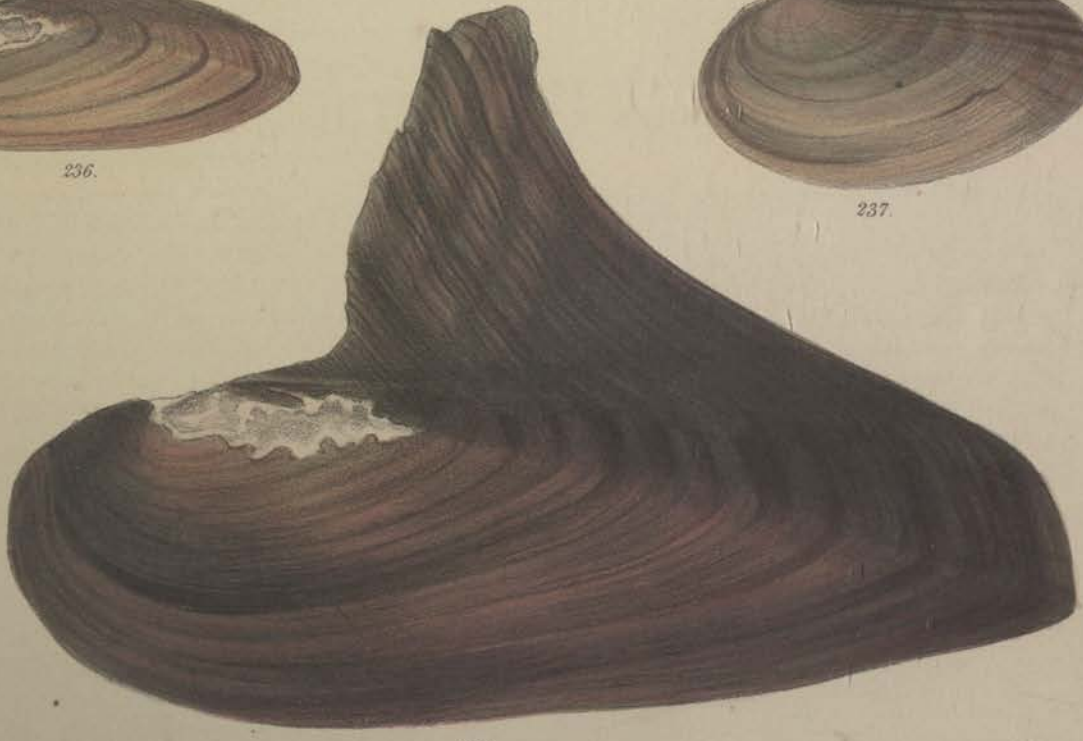
Hab. River Seine.

More inflated, wider, and more obtuse at the extremities than *U. pictorum*.

235.

236.

237.



238.

Sowerby, del. et. lith.

Vincent Brooks, Imp.

UNIO.

PLATE XLIII.

Species 235. (Mus. Sowerby.)

UNIO VENTRICOSUS. *Un. testâ inflatâ, inæquilaterali, subcuneiformi, intus purpureo-argenteâ, extus lævigatâ, flavidâ, ad aream posticam fasciis viridibus paucis radiatâ; latere antico brevi, angusto, margine dorsali declivi, margine ventrali acclivi; latere postico lato, angulato, areâ postangulari parvâ, margine dorsali elevato, termino acuminato, margine ventrali sursum validè acclivi, umbonibus magnis, ventricosis, margine cardinali dentibus posticis uno et duobus laminatis, anticis duobus et uno brevibus, irregulariter crenatis.*

THE VENTRICOSE UNIO. Shell inflated, inequilateral, rather wedge-shaped, silvery-purple within, smooth, yellowish without, rayed with few green bands on the posterior area; anterior side short, narrow, with the dorsal margin sloping, the ventral margin sloping upwards; posterior side broad, angular, postangular area small, dorsal margin elevated, with the end acuminated, ventral margin sloping strongly upwards, umboes large, ventricose, hinge margin with one and two posterior laminated teeth, and two and one anterior irregularly crenated.

BARNES, Silliman's Journal, vol. vi. t. 14. f. 14.

Hab. North America.

The cuneate form, and broad, strong upward sloping of the posterior ventral margin form the distinguishing characteristics of this species.

Species 236. (Mus. Hanley.)

UNIO LANCEOLATUS. *Un. testâ angustâ, elongatâ, compressâ, intus subroseâ, extus flavidescenti, lævigatâ, latere antico breviusculo, latere postico elongato, termine acuminato, subtruncato, dentibus lateralibus uno et duobus posticis elongatis laminatis, cardinalibus in utrâque valvâ uno prominente.*

THE LANCEOLATE UNIO. Shell narrow, elongated, compressed, rose within, yellowish, smooth without, anterior side rather short, posterior side elongated, with acuminated end slightly truncated, lateral teeth one and two posterior elongated, laminated, cardinal teeth in each valve one, prominent.

LEA, Trans. Amer. Phil. Soc.

Hab. South Carolina.

Distinguished by its peculiar lanceolate compressed form.

Species 237. (Mus. Hanley.)

UNIO DELPHINULUS. *Un. testâ tenui, compressâ, symphynotâ, ovali, margine dorsali postico perelevato, in alam producto, alâ posticè obliquè subincurvâ, anticè arcuatim abbreviato, margine dorsali antico declivi.*

THE LITTLE DOLPHIN UNIO. Shell thin, compressed, symphynote, oval, posterior dorsal margin much elevated, produced into a wing; wing posteriorly obliquely rather curved inwards, anteriorly shortened and curved inwards, anterior dorsal margin sloped.

MORELET, Test. Noviss. vol. i. p. 31.

Hab. Yucatan.

The curved shape of the alate appendage of the posterior dorsal edge separates this beautiful little shell from others of the symphynote form.

Species 238. (Mus. Sowerby.)

UNIO DELPHINUS. *Un. testâ oblongâ, compressâ, symphynotâ, intus albâ, extus fuscâ, lævigatâ, latere antico brevi, margine dorsali rectiusculo, latere postico obliquè angulato, elongato, termino obliquè truncato, margine dorsali in alam perelevatam perpendiculariter rugatam posticè incurvam producto, margine ventrali rectiusculo, margine cardinali compressâ, subrugatâ, dente laterali postico laminato, elongato.*

THE DOLPHIN UNIO. Shell oblong, compressed, symphynote, white within, brown, smooth without, anterior side short, with dorsal margin rather straight, posterior side obliquely angular, elongated, obliquely truncated at the end, dorsal margin produced into a much elevated, perpendicularly wrinkled, posteriorly incurved wing, ventral margin rather straight, hinge margin compressed, rather rugose, lateral posterior tooth laminar, elongated.

GRÜNER, Wiegmann, Archiv, 1841, t. 11. f. 1.

Hab. Malacca.

No other species of alate *Unio* has so broad an elevated and trigonal wing, nor so straight a ventral margin.

239.

240.

241.

242.

Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XLIV.

Species 239. (Mus. Sowerby.)

UNIO ORBICULATUS. *Un. testâ crassâ, orbiculato-subovali, intus albâ, dentibus cardinalibus crassis, rugosis, dentibus lateralibus laminatis, solidis, extus flavidè fusco, concentricè distanter rugato, latere postico obliquo, subabruptè truncato, latere antico brevissimo.*

THE ORBICULAR UNIO. Shell thick, orbicularly subovate, white within, cardinal teeth thick, rugose, lateral teeth laminar, solid, yellowish-brown without, concentrically distantly wrinkled, posterior side oblique, rather abruptly truncate, anterior side very short.

HILDRETH, in Silliman's Journal of Science.

Unio abruptus, Say.

Unio crassus, Conrad.

Hab. United States.

Species 240. (Mus. Hanley.)

UNIO TENUISSIMUS. *Un. testâ tenui, compressâ, obliquè oblongo-ellipticâ, intus pallidâ, dente cardinali in utrâque valvâ subprominenti, dentibus lateralibus elongatis, laminatis uno et duobus, extus flavido-virescenti, post angulum viridi-nigricante, posticè obliquè lineatim radiatâ, latere antico angusto, brevissimo, latere postico elongato, lato, rotundatim angulato, termino acuminato, margine dorsali subelevato, deinde declivi, margine ventrali posticè arcuato.*

THE VERY THIN UNIO. Shell thin, flat, obliquely oblong-elliptical, pale within, with a rather prominent cardinal tooth in each valve, lateral teeth elongated, laminated one and two, outside yellow-greenish, very dark green behind the angle, posteriorly obliquely linearly rayed, anterior side narrow, very short, posterior side elongated, wide, roundly angular, acuminated at the end, dorsal margin rather raised, then sloping, ventral margin posteriorly arched.

LEA, Amer. Phil. Trans. vol. iii. t. 11. f. 21.

Unio purpurascens, Swains.

Unio velum, Say.

Hab. River Ohio.

Species 241. (Mus. Hanley.)

UNIO SCHWARTZENBACHII. *Un. testâ subcylindricâ, oblongo-subquadratâ, intus albido-cærulescente, extus obscurè olivaceâ, latere antico brevi, margine dorsali recto, latere postico elongato obliquè angulato, termino obliquè truncato, margine dorsali subelevato, areâ postangulari sulcâ obliquâ impressâ, margine ventrali recto, umbonibus angulatim rugatis.*

SCHWARTZENBACH'S UNIO. Shell subcylindrical, oblong-subquadrate, bluish-white within, dull olive without, anterior side short, with dorsal margin straight, posterior side oblong, obliquely angular, obliquely truncated at the end, dorsal margin rather raised, post-angular area impressed with an oblique groove, ventral margin straight, umboes angularly wrinkled.

ROSMASSLER.

Hab. ——?

Species 242. (Mus. Sowerby.)

UNIO ALATUS. *Un. testâ compressâ, latâ, subovali, symphynotâ, intus purpureâ, dentibus cardinalibus in utraque valvâ duobus crenulatis, dentibus lateralibus uno et duobus, laminatis, elongatis, extus viridi-nigrescenti, concentricè subrugatâ, perobliquè obscurè biangulari, latere antico brevissimo, latere postico magno, margine dorsali perelevato, in alam magnam latam producto, margine ventrali inflato.*

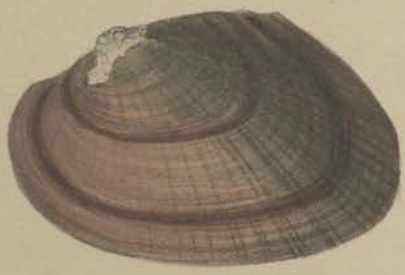
THE WINGED UNIO. Shell compressed, wide, rather oval, symphynote, purple within, cardinal teeth two in each valve, wrinkled, lateral teeth one and two, laminated, elongated, without blackish-green, concentrically somewhat wrinkled, very obliquely obscurely biangular, anterior side very short, posterior side large, the dorsal margin much elevated, produced into a large broad wing, ventral margin inflated.

SAY, Lea on Unio, vol. i. p. 62.

Hab. North America.

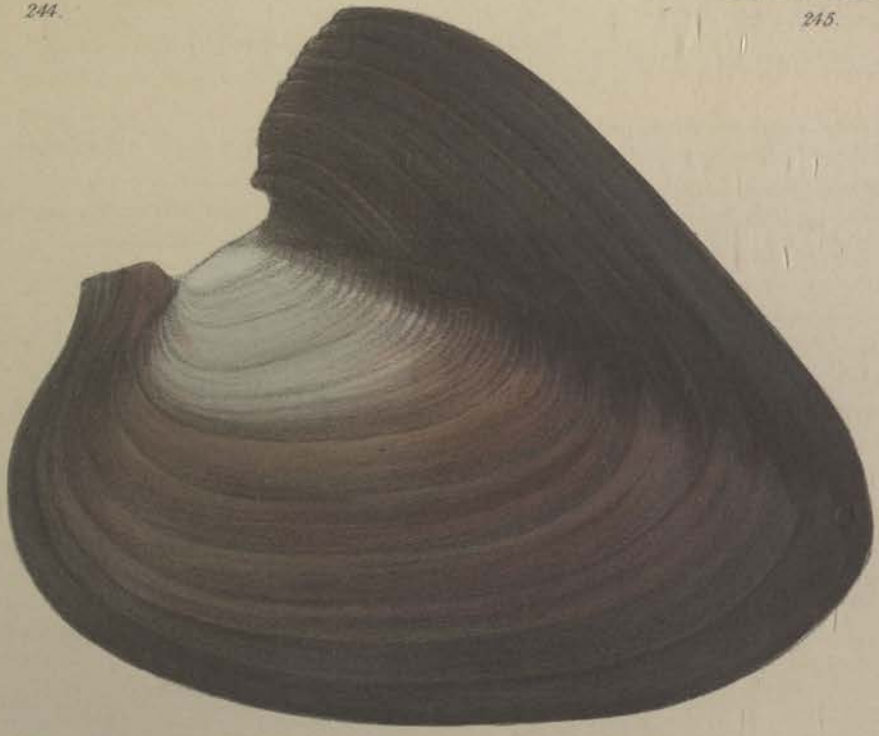
May easily be known by the broadness of its marginal expansion and the bright purple colour of its nacre.

243.



244.

245.



246.

Sowerby, del. et. lith.

Vincent Brooks, Imp

UNIO.

PLATE XLV.

Species 243. (Mus. Lea.)

UNIO SOLENIFORMIS. *Un. testâ angusto-elliptică, arcuatâ, subcompressâ, valde inæquilaterali, intus albido-cærulescenti, extus lævigatâ, concentricè subrugatâ, epidermide fuscâ, latere antico brevi, termine rotundo, latere posticâ elongato, margine dorsali subarcuatim declivi, termine obliquè subtruncato, margine ventrali medio arcuato.*

THE SOLENIFORM UNIO. Shell narrow-elliptical, arched, rather compressed, very inequilateral, within bluish-white, without smooth, slightly concentrically wrinkled, with brown epidermis, anterior side short, rounded, posterior side elongated, with dorsal margin arched, sloping downwards, the end obliquely subtruncated, ventral margin arched in the centre.

LEA, on Unio, vol. i. p. 98.

Hab. Ohio River.

The form of this shell resembles that of an elongated kidney-bean.

Species 244. (Mus. Hanley.)

UNIO VIRIDIS. *Un. testâ ovatâ, subinflatâ, intus albido-subviridi, extus lævigatâ, olivaceâ, posticè viridi, lineatim radiatâ, radiis subdivisis, latere antico brevi, angusto, latere postico lato, oblongo, obliquè truncato, margine dorsali subelevato, margine ventrali convexâ, umbonibus tuberculis magnis angulatim undatis rugatis.*

THE GREEN UNIO. Shell ovate, rather inflated, greenish-white within, smooth, olive without, posteriorly linearly rayed with green, rays subdivided, anterior side short, narrow, posterior side wide, oblong, obliquely truncated, dorsal margin rather elevated, ventral margin convex, umboes wrinkled with large, angularly waved tubercles.

CONRAD, Monograph.

Unio Tappanianus, Lea.

Hab. Hallidaysberg.

Species 245. (Mus. Hanley.)

UNIO AURATUS. *Un. testâ oblongâ, subinflatâ, tenui, intus infra umbones auratâ, dentibus cardinalibus in utrâque valvâ uno, crenato, extus aureâ viridi radiatâ, posticè viridi, latere antico brevi, subquadratim rotundo, latere postico oblongo, obliquè truncato, margine dorsali subelevato, rectiusculo, umbonibus tuberculis elongatis angulatim divergentibus rugatis, margine ventrali rectiusculo.*

THE GILDED UNIO. Shell oblong, subinflated, thin, gilded within under the umboes, cardinal teeth one in each valve, crenated, gold-coloured without, rayed with green, the posterior part green, anterior side short, rather squarely rounded, posterior side oblong, obliquely truncated, dorsal margin rather elevated, rather straight, umboes wrinkled with elongated tubercles angularly diverging, ventral margin rather wide.

SWAINSON.

Hab. South America.

Species 246. (Mus. Lea.)

UNIO INFLATUS. *Un. testâ subcuneiformi, symphynotâ, compressâ, intus violaceâ, dentibus cardinalibus sublaminatis, in utrâque valvâ uno, dentibus lateralibus elongatis, ad terminos laminatis, extus lævigatâ, epidermide fuscâ, latere postico lato, margine dorsali in alam latam elevatam subtrigonam producto, latere antico brevi, margine dorsali in alam parvam producto.*

THE INFLATED UNIO. Shell subcuneiform, symphynote, compressed, violet within, cardinal teeth sublaminated, one in each valve, lateral teeth elongate, laminated at the ends, smooth without, with brown epidermis, posterior side wide, with the dorsal margin produced into a wide elevated subtrigonal wing, anterior side short, with dorsal margin produced into a small wing.

LEA, on Unio, vol. i. p. 109.

Hab. River Alabama.

Of the three bialate species this is the most cuneiform, having the short side narrow.

247.

248.

249.

250.

Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XLVI.

Species 247. (Mus. Lea.)

UNIO BIALATUS. *Un. testâ subovali, compressâ, symphynotâ, intus albâ iridescenti, dentibus lateralibus tenuibus, linearibus, extus olivaceo-viridi lævigatâ, latere postico lato, margine dorsali in alam latam subtrigonam expanso, infra alum rugis paucis magnis undato, latere antico angustiore, brevi, in alam parvam cuneatam producto, umbonibus rugatis, haud prominentibus.*

THE BIALATE UNIO. Shell subovate, compressed, symphynote, iridescent-white within, lateral teeth thin, linear, olive-green and smooth without, posterior side wide, with dorsal margin expanded into a wide, rather trigonal wing, beneath the wing undulated with few large wrinkles, anterior side narrow, short, produced into a small wedge-shaped wing, umboes rugose, scarcely prominent.

LEA, on Unio, vol. i. p. 59. pl. 14. f. 24.

Hab. Canton River.

The broad wrinkles at the base of the larger wing, besides other characters, separate this species from *U. inflatus*, which it otherwise somewhat resembles.

Species 248. (Mus. Hanley.)

UNIO GUNDLACHII. *Un. testâ compressâ, ovatâ, intus purpureâ, dentibus cardinalibus uno et duobus prominentibus, crenulatis, dentibus lateralibus posticis duobus et uno, elongatis, laminatis, extus minutè regulariter liris concentricis rugatâ, epidermide obscurè fusco, prope umbones radiato, umbonum apicibus minutè rugatis, latere antico brevi, margine dorsali brevissimo, angulato, margine terminali declivi, latere postico obliquè elongato, margine dorsali rectiusculo, margine terminali declivi, infrà subacuminato, margine ventrali rectiusculo.*

GUNDLACH'S UNIO. Shell compressed, ovate, purple within, cardinal teeth one and two, prominent, crenulated, posterior lateral teeth two and one, elongated, laminated, exterior minutely regularly wrinkled with concentric ridges, epidermis dull-brown, radiated near the umboes, apices of the umboes minutely wrinkled, anterior side short, with the dorsal margin very short, angular, terminal margin sloping, posterior side obliquely elongated, dorsal margin rather straight, terminal margin sloping, subacuminate below, ventral margin rather straight.

DUNKER, Malacozoologische Blätter, vol. v. p. 228.

Unio persulcata, Lea.

Hab. ——?

Species 249. (Mus. Hanley.)

UNIO HANLEYANUS. *Un. testâ parvâ, solidâ, tumidâ, ovali, intus albâ, extus flavidâ, lævigatâ, prope umbones concentricè viridi fasciatâ, latere antico brevissimo, subrotundo, latere postico obliquè elongato, termino acuminato, post angulum sulcâ obliquâ impresso, margine dorsali subarcuato, subdeclivi, margine ventrali ad terminum sursum acclivi.*

HANLEY'S UNIO. Shell small, solid, tumid, oval, white within, yellowish without, smooth, near the umboes concentrically banded with green, anterior side very short, rather round, posterior side obliquely elongated, with acuminated end, behind the angle impressed with an oblique groove, dorsal margin rather arched and slightly sloping, ventral margin sloping upwards at the end.

LEA.

Hab. Georgia, North America.

Species 250. (Mus. Lea.)

UNIO LÆVISSIMUS. *Un. testâ ovatâ, subcompressâ, symphynotâ, bialata, alis proximis, intus roseâ, extus lævigatâ, olivaceâ, latere antico breviusculo, margine dorsali in alam parvam expanso, latere postico oblongo, margine dorsali in alam latam elevatam expanso.*

THE VERY SMOOTH UNIO. Shell ovate, subcompressed, symphynote, bialate, wings proximate, interior rose, exterior smooth, olive, anterior side very short, with the dorsal margin expanded into a broad elevated wing; posterior side oblong, with dorsal margin expanded into a broad elevated wing.

LEA, on Unio, vol. i. p. 58. pl. 13. f. 23.

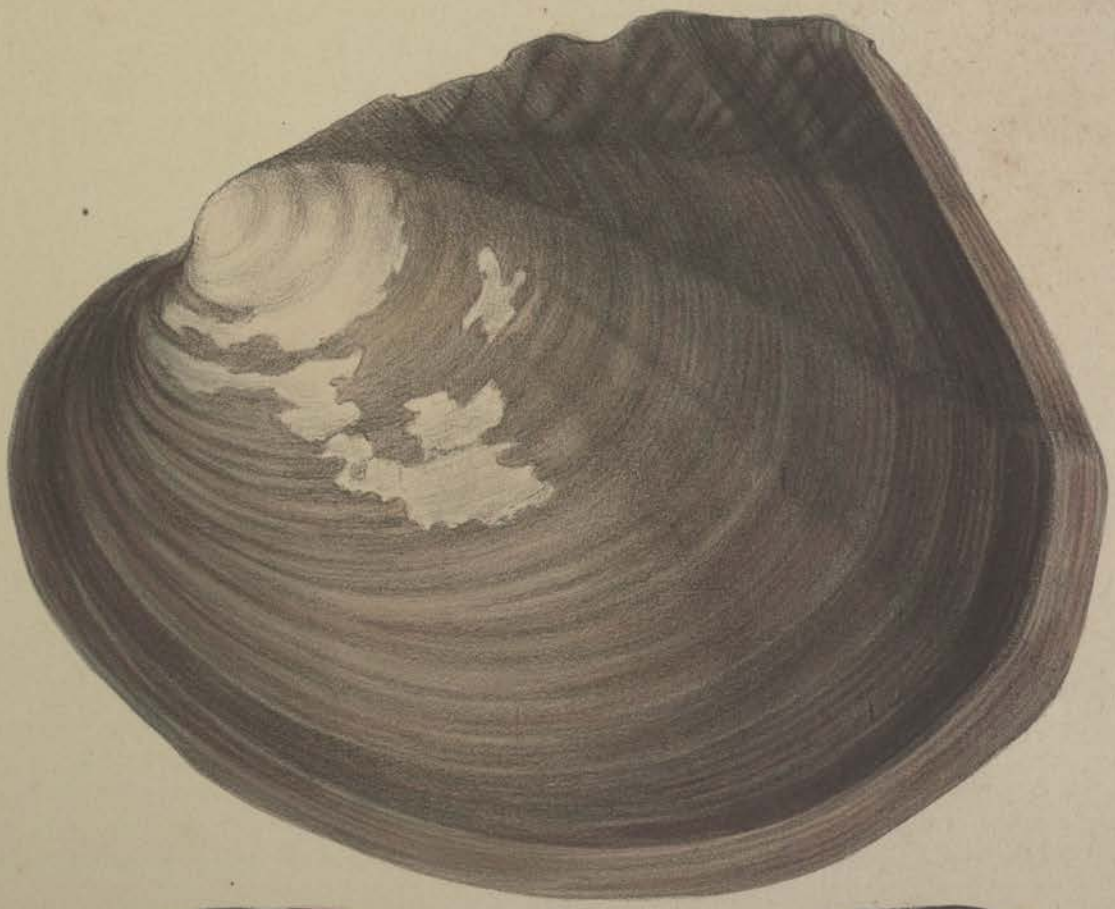
Hab. River Ohio.

More oval than the other bialate species, with the wings proximate, not much raised.

252.

251.

253.



254.

255.

256.

Sowerby, del et lith.

Vincent Brooks, Imp

UNIO.

PLATE XLVII.

Species 251. (Mus. Brit.)

UNIO BURTONI. *Un. testâ parvâ, subrotundo-ovali, pallidè stramineâ, anticè lævigatâ, ad marginem divaricatim sulcatâ, medio et posticè acutè, angulatim, et crebrè sulcatâ, intùs albidâ; latere postico oblongo, termino acuminato, margine dorsali subelevato; latere antico brevissimo, rotundo, umbonibus parvis, dentibus cardinalibus angustis.*

BURTON'S UNIO. Shell small, rather roundly oval, pale straw-coloured, smooth in front, divergently grooved at the edge, sharply, angularly, and closely sulcated in the middle and at the back, whitish within; posterior side oblong, acuminated at the end, with dorsal margin slightly raised; anterior side very short, round, umboes small, cardinal teeth narrow.

WOODWARD, Pro. Zool. Soc. 1859, p. 348.

Hab. Tanganika, Central Africa.

With the exception of a portion of the anterior side, the surface of this shell is covered with close zigzag sulci.

Species 252. (Mus. Hanley.)

UNIO SUBPLANUM. *Un. testâ subquadratâ, crassâ, latâ, tumidâ, valde inæquilaterali, intùs albâ; latere postico magno, biangulato, inter angulos latè planato, post angulum posticum subtrigonâ, margine dorsali recto, elevato, margine terminali suprà declivi, infrà truncatâ, margine ventrali ante angulum subcontracto, tum inflato; latere antico brevissimo, semirotundo, epidermide crassâ, nigrâ.*

THE NEARLY FLAT UNIO. Shell subquadrate, thick, wide, tumid, very inequilateral, white within; posterior side large, with two angles, between the angles widely flattened, behind the posterior angle subtrigonal, dorsal margin straight, elevated, terminal margin sloping above, truncated beneath, ventral margin rather contracted in front of the angle, then swelled; anterior side very short, half-round, epidermis thick, black.

CONRAD, Monograph of Unio; Virginia.

Species 253. (Mus. Hanley.)

UNIO GREENII. *Un. testâ oblongâ, crassâ, subobliquâ, lævigatâ, intùs albidâ; latere postico oblongo, obliquè biangulato, inter angulos obliquè truncato, subplanato, margine dorsali rectiusculo, margine ventrali inflato; latere antico brevissimo, declivi, epidermide olivaceo.*

GREEN'S UNIO. Shell oblong, thick, suboblique, smooth, white within; posterior side oblong, obliquely double-angled, obliquely truncated, nearly flat between the angles, dorsal margin rather straight, ventral margin inflated; anterior side very short, sloping, epidermis olive.

CONRAD, New Freshwater Shells.

Hab. Virginia.

Species 254. (Mus. Cuming in Brit.)

UNIO HAINESIANUS. *Un. testâ rotundâ, tenui, inflatâ, lævigatâ, valde inæquilaterali, epidermide viridi, subaureâ indutâ, anticè concentricè plicatâ; latere postico tumido, inflato, magno, alato, obscurè triangulato, margine dorsali elevato, areâ submarginali divaricatim plicatâ, margine terminali inter angulos truncato, margine ventrali convexo; latere antico brevi, rotundo, margine ventrali sursum acclivi, umbonibus rotundis.*

HAINES'S UNIO. Shell round, thin, inflated, smooth, very inequilateral, invested with a green, slightly golden-tinted epidermis, concentrically plicated in front; posterior side tumid, inflated, large, winged, with three obscure angles, dorsal margin raised, submarginal area divergently plaited, terminal margin truncated between the angles, ventral margin convex; anterior side short, round, ventral margin sloping upwards, umboes rounded.

LEA, Unio, vol. vi. p. 10. pl. 21. f. 2.

Hab. Little Arkansas.

Of all the large alate species, this has the greatest rotundity and fulness of form.

Species 255. (Mus. Cuming in Brit.)

UNIO POSTELLII. *Un. testâ oblongâ, crassâ, subrhom-*

boideâ, complanatâ, epidermide fusco-flavescenti indutâ, intus purpureâ, dentibus cardinalibus duobus et uno, dentibus lateralibus laminatis; latere postico elongato, biangulato, supra angulos compressâ, elevatâ, margine rectiusculo, inter angulos complanato, termino truncato, margine dorsali recto; latere antico brevissimo, subquadrato.

POSTELL'S UNIO. Shell oblong, thick, subrhomboidal, flattened, invested with yellowish-brown epidermis, purple within, cardinal teeth one and two, lateral teeth laminated; posterior side elongated, with two angles, above the angles compressed, elevated, margin rather straight, flattened between the angles, truncated at the end, dorsal margin straight; anterior side very short, rather square.

LEA, Unio, vol. vi. p. 32. pl. 26. f. 94.

Hab. Randall's Creek, near Columbia, Georgia.

Species 256. (Mus. Cuming in Brit.)

UNIO LAOENSIS. *Un. testâ crassâ, medio compressâ, terminibus inflatâ, reniformi, epidermide fusco-nigricante indutâ, intus albâ, dentibus cardinalibus uno et duobus, dentibus lateralibus laminatis; latere postico oblongo, margine dorsali elevato, arcuato, lateraliter declivi, termino vix truncato, margine dorsali medio concavo; latere antico brevi, margine ventrali rotundo, margine dorsali declivi.*

THE LAO UNIO. Shell thick, compressed in the middle, inflated at the ends, reniform, invested with blackish-brown epidermis, white within, cardinal teeth one and two, lateral teeth laminated; posterior side elongated, dorsal margin elevated, arched, laterally sloping, scarcely truncated at the end, dorsal margin concave in the middle; anterior side short, ventral margin rounded, dorsal margin sloping.

LEA —— ? MS. in Cum. Cab.

Hab. Camboja, Lao Mountains.

257.

258.

259.

260.

Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE XLVIII.

Species 257. (Mus. Cuming in Brit.)

UNIO LEPTODON. *Un. testâ tenui, ovali, oblongâ, lævi, concentricè rugatâ, pallidè viridi, intus purpureâ; latere postico oblongo, obscurè biangulato, termine obliquè truncato, subtus acuminato, margine dorsali convexâ, margine ventrali rotundatim convexo, terminibus elevatis; latere antico brevi, rotundo, margine dorsali brevissimo, umbonibus parvis, dentibus tenuissimis subobsoletis.*

THE SCALE-TOOTHED UNIO. Shell thin, oval, oblong, smooth, concentrically wrinkled, pale-green, purple within; posterior side oblong, obscurely biangular, the end obliquely truncated, acuminated beneath, dorsal margin convex, ventral margin roundly convex, raised at the ends; anterior side short, round, dorsal margin very short, umboes small, teeth very thin, rather obsolete.

RAFINESQUE, ——?

Hab. ——?

Species 258. (Mus. Cuming in Brit.)

UNIO SEMIQUADRATA. *Un. testâ compressâ, tenui, subtrigonâ, alatâ, flavido-viridi, fasciis viridibus tribus posticè radiatâ, intus albido-cærulescente, dentibus lateralibus tenuissimis; latere postico magno, expanso, margine dorsali in cuneum elevato, termino rotundo, margine ventrali medio subcontracto; latere antico parvo, angustato, margine dorsali recto, brevissimo, angulato.*

THE HALF-SQUARE UNIO. Shell compressed, thin, subtrigonal, winged, yellowish-green, rayed posteriorly with three green rays, bluish-white within, lateral teeth very thin; posterior side large, expanded, with dorsal margin raised into a corner, the end rounded, ventral margin somewhat contracted in the middle; anterior side small, narrow, dorsal margin straight, very short, angular.

SOWERBY.

Hab. Camboja, Lao Mountains.

Among the widely-alate species this is the most expanded in proportion to its size.

Species 259. (Mus. Cuming in Brit.)

UNIO ARCULA. *Un. testâ solidâ, valde angulatâ, crassâ, tumidâ, subtrigonâ, epidermide fusco-nigricanti, viridi radiatâ indutâ, intùs albido-purpureâ; latere postico inflato, in angulum magnum elevato, margine dorsali subdeclivi, termino acutè biangulato, ligamento magno, margine ventrali convexo; latere antico angusto, rotundo, margine dorsali depresso, umbonibus magnis, perelevatis, plicis magnis undatis, dentibus lateralibus nullis.*

THE LITTLE ARK UNIO. Shell solid, strongly angular, thick, tumid, subtrigonal, invested with a blackish-brown, green-rayed epidermis, whitish-purple within; posterior side inflated, raised into a large, elevated angle, dorsal margin rather sloping, acutely biangular at the end, ligament large, ventral margin convex; anterior side narrow, round, with dorsal margin depressed, umboes large, much elevated, undulated with large plaits, no lateral teeth.

LEA on Unio, vol. ii. p. 71. t. 22. f. 69.

Hab. Georgia, in America.

Remarkable for its angular form and rounded knobs, forming thick plaits on the umboes.

Species 260. (Mus. Cuming in Brit.)

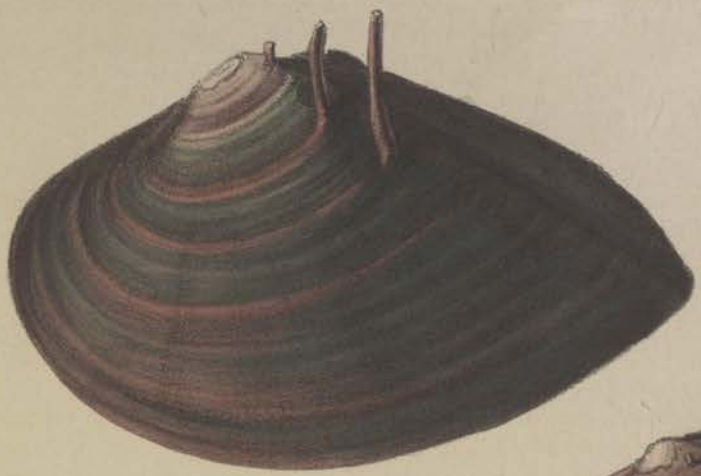
UNIO HOUSEI. *Un. testâ magnâ, compressâ, subovali, tenui, alatâ, epidermide nigricanti, irregulariter plicatâ indutâ, intus pallidè purpureâ; latere postico expanso, biangulato, termino subtruncato, supra angulos alato, margine dorsali divaricatim plicatâ, margine ventrali arcuatâ; latere antico brevi, margine dorsali alato.*

HOUSE'S UNIO. Shell large, compressed, rather oval, thin, winged, invested with a blackish, irregularly-plaited epidermis, pale-purple within; posterior side expanded, biangular, subtruncated at the end, with a wing above the angles, the dorsal margin divergently plaited, ventral margin arched; anterior side short, dorsal margin winged.

LEA, Unio, vol. ii. p. 71. t. 22. f. 69.

Hab. Georgia, in America.

The peculiarity of this species in comparison with other alate species is the plaited dorsal margin of the wing.



261.

262.

263.

264.

Sowerby, del et lith

Vincent Brooks, Imp

UNIO.

PLATE XLIX.

Species 261. (Mus. Cuming in Brit.)

UNIO SPINOSUS. *Un. testâ ovatâ, acuminatâ, lævigatâ, viridi et fusco fasciatâ et radiatâ, posticè medio et prope umbones spinis extantibus armatâ, intùs purpureâ; latere postico attenuato, acuminato, angulato, margine ventrali convexo; latere antico subangustato.*

THE SPINOUS UNIO. Shell oval, acuminated, smooth, banded and rayed with brown and green, posteriorly in the middle and near the umboes armed with standing spines, purple within; posterior side attenuated, acuminated, angular, ventral margin convex; anterior side rather narrow.

LEA on Unio, vol. ii. p. 57. t. 16. f. 50.

Hab. Georgia, in America.

Species 262. (Mus. Cuming in Brit.)

UNIO CRISPISULCATUS. *Un. testâ parvâ, breviter ovali, solidâ, stramineâ, in angulis acutis omnino sulcatâ, intùs albidâ, posticè cæruleo-iridescente; latere postico oblongo, margine dorsali brevi, rectiusculo, margine laterali declivi, termino vix truncato; latere antico brevi, margine dorsali declivi, margine ventrali convexo.*

THE GROOVED UNIO. Shell small, shortly oval, solid, straw-coloured, grooved all over in sharp angles, white within, posteriorly iridescent-blue; posterior side oblong, dorsal margin short, rather straight, lateral margin sloping, very slightly truncated at the end; anterior side short, dorsal margin sloping, ventral margin convex.

LEA, MS. in Mus. Cuming.

Hab. ——?

Differing from *U. Burtoni* in being covered all over with the angularly diverging sulci.

Species 263. (Mus. Cuming in Brit.)

UNIO COLLINUS. *Un. testâ oblongâ, subsolidâ, pallidè fuscâ, lævigatâ, posticè spinis brevibus extantibus medio et prope umbones armatâ, intus albâ, subcæruleseenti; latere postico oblongo, rotundatim angulato, termino rotundo, post angulum compresso, margine dorsali recto, margine laterali declivi, margine ventrali ante angulum contracto; latere antico brevi, rotundo, suprà declivi.*

THE HILL UNIO. Shell oblong, subsolid, pale-brown, smooth, posteriorly in the middle and near the umboes armed with short, standing-out spines, bluish-white within; posterior side oblong, roundly angular, rounded at the end, compressed behind the angle, dorsal margin straight, lateral margin sloping, ventral margin contracted in front of the angle; anterior side short, round, sloping above.

LEA on Unio, vol. vi. p. 53. pl. 32. f. 109.

Hab. Virginia.

Species 264. (Mus. Cuming in Brit.)

UNIO CUMINGII. *Un. testâ compressâ, crassâ, magnâ, expansâ, in nodulis rotundis plicatâ, intùs albidâ, dentibus crassis; latere postico magno, alato, margine dorsali latè elevato, post angulum compresso, termino truncato, biangulato, margine ventrali ante angulum sursùm acclivi, medio convexo; latere antico brevissimo, umbonibus concentricè plicatis.*

CUMING'S UNIO. Shell compressed, thick, large, expanded, plaited in rounded nodules, whitish within, teeth thick; posterior side large, winged, dorsal margin widely elevated, compressed behind the angle, truncated at the end, biangular, ventral margin sloping in front of the angle, convex in the middle; anterior side very short, umboes concentrically plicated.

LEA on Unio, vol. vi. p. 9. pl. 21. f. 1.

Hab. Uphanpee Creek, Alabama.

The plaits on the surface are rounded, so as to give a quilted appearance.

November, 1866.

265.

Sowerby, del.et lith.

266.

Vincent Brooks, Imp.

UNIO.

PLATE L.

Species 265. (Mus. Cuming in Brit.)

UNIO MYERSIANUS. *Un. testâ ovali, compressâ, expansâ, alatâ, tenui, lævigatâ, fusco-flavidâ, fasciatâ, intus purpureâ; latere postico magno, expanso, biangulato, margine dorsali elevato, tortuo, termino truncato, margine ventrali ante angulum convexo, anticè sursum acclivi; latere antico brevi, angusto, margine dorsali alato.*

MYERS'S UNIO. Shell oval, compressed, expanded, winged, thin, smooth, yellowish-brown, banded, purple within; posterior side large, expanded, biangular, with dorsal margin elevated, tortuous, truncated at the end, ventral margin convex in front of the angle, anteriorly sloping upwards; anterior side short, narrow, dorsal margin winged.

LEA on Unio, vol. vi. p. 9. pl. 21. f. 1.

Hab. Camboja, Lao Mountains.

The tortuous dorsal margin of the posterior wing, and the existence of the small anterior wing, distinguish this species from *U. alatus*.

Species 266. (Mus. Cuming in Brit.)

UNIO COMPLANATUS. *Un. testâ subovali, compressâ, crassâ, margine dorsali et medio plicis magnis divergentibus undato, intus albo, dentibus crassis; latere postico magno, elevato, alato, obliquè biangulato, margine ventrali ante angulum acclivi, tum convexo, medio rectiusculo; latere antico brevi, declivi, umbonibus undulatim plicatis.*

THE FLATTENED UNIO. Shell suboval, compressed, thick, at the dorsal margin and in the centre undulated with large diverging plaits, white within, teeth thick; posterior side large, elevated, winged, obliquely biangular, ventral margin in front of the angle sloping upwards, then convex, rather straight in the middle; anterior side short, sloping, umboes wavily plaited.

BARNES, Lea on Unio, vol. i. p. 62.

Hab. Ohio.

Much less expanded than *U. Cumingii*, and differently plaited.

November, 1866.

267.

268

269.

270.

UNIO.

PLATE LI.

Species 267. (Mus. Cuming in Brit.)

UNIO MARGINATUS. *Un. testâ oblongâ, subcuneiformi, crassâ, lævigatâ, subluteâ, fasciis strigisque interruptis viridibus radiatâ, intus albidâ, dentibus cardinalibus in utrâque valvulâ unâ, simplicibus, dentibus lateralibus nullis; latere postico oblongo, valde angulato, post angulum complanato, super angulum subnodoso, antè angulum concavo, margine dorsali declivi, margine ventrali medio convexo, umbonibus posticè angulatim elevatis; latere antico breviusculo, margine ventrali rotundatim acclivi, margine dorsali depresso.*

THE BORDERED UNIO. Shell oblong, subcuneiform, thick, smooth, yellowish, rayed with interrupted green bands and stripes, whitish within, cardinal teeth one in each valve, simple, no lateral teeth; posterior side oblong, strongly angular, flattened behind the angle, nodulose upon the angle, concave in front of the angle, dorsal margin sloping, ventral margin convex in the centre, with the umboes posteriorly angularly elevated; anterior side rather short, ventral margin roundly sloping upwards, dorsal margin depressed.

LEA, American Philosophical Transactions.

Unio varicosus, Lam.

Mya rugulosa, Wood.

Hab. Massachusetts.

The space behind the angle is flattened, and as it were obliquely truncated.

Species 268. (Mus. Cuming in Brit.)

UNIO PARANENSIS. *Un. testâ rotundâ, crassâ, subcompressâ, olivaceo-castaneâ, lævigatâ, concentricè rugatâ, intùs albâ, dentibus cardinalibus uno et duobus, irregulariter serratis, dentibus lateralibus laminatis, umbonibus lateraliter terminalibus, margine dorsali elevato, convexo, areâ impressâ et angulo radiato.*

THE PARA UNIO. Shell round, thick, rather compressed, olive-chestnut, smooth, concentrically wrinkled, white within, cardinal teeth one and two, irregularly serrated, lateral teeth laminar, umboes laterally terminal, dorsal margin elevated, convex, rayed with an impressed area and angle.

LEA, Trans. Am. Phil. Soc. 5. t. 14. f. 42.

Unio Solsiana, D'Orbigny.

Hab. River Parana.

Of a singularly rounded form, with the umboes laterally terminal.

Species 269. (Mus. Cuming in Brit.)

UNIO VON BUSCHEA. *Un. testâ inæqualiter ovali, tenui, lævigatâ, olivaceo-castaneâ, subaureâ, subinflatâ, intùs albâ, epidermide posticè rugatâ; latere postico lato, oblongo, obliquè triangulato, termino obliquè truncato, margine dorsali recto, elevato, margino ventrali convexo, prope angulum sursùm acclivi; latere antico brevissimo, margine dorsali brevi, recto, termino angulato, termine laterali rotundo, dentibus cardinalibus in utrâque valvâ uno, dentibus lateralibus nullis.*

VON BUSCHE'S UNIO. Shell unequally oval, thin, smooth, olive-chestnut, golden-tinted, somewhat inflated, white within, epidermis posteriorly wrinkled; posterior side wide, oblong, with three oblique angles, end obliquely truncated, dorsal margin straight, elevated, ventral margin convex, sloping upwards near the angle; anterior side very short, dorsal margin short, straight, with terminal angle, lateral termination rounded, cardinal teeth one in each valve, no lateral teeth.

LEA, ——? MS. Cuming's Cabinet.

Hab. ——?

Species 270. (Mus. Cuming in Brit.)

UNIO POULSONI. *Un. testâ subovali, alatâ, sublævigatâ, castaneo-nigrescenti, subinflatâ, intùs purpureâ; latere postico lato, oblongo, perobliquè angulis duobus elevatis radiatâ, termino infra angulos producto, rotundato, margine dorsali in alam elevato, margine ventrali posticè convexo, medio vix contracto; latere antico brevi, angustato, termino rotundo, dentibus cardinalibus uno et duobus, dentibus lateralibus laminatis.*

POULSON'S UNIO. Shell somewhat oval, alated, rather smooth, blackish-chestnut, rather inflated, purple within; posterior side wide, oblong, very obliquely rayed with two elevated angles, the end produced and rounded beneath the angles, dorsal margin raised into an angle, ventral margin posteriorly convex, very slightly contracted in the middle; anterior side short, narrow, rounded at the end, cardinal teeth one and two, lateral teeth laminar.

CONRAD, Freshwater Shells.

Unio purpuratus, Lamarck.

Unio ater, Lea.

Unio lugubris, Say.

Hab. Mississippi.

This is the most oval of the alate species in general form, and has the least prominent dorsal wing of any.

271.

272.

273.

274.

Sowerby, del. et lith.

Vincent Brooks, Imp

UNIO.

PLATE LII.

Species 271. (Mus. Cuming in Brit.)

UNIO GRAVIDUS. *Un. testâ magnâ, valde inflatâ, donaciformi, alatâ, lævi, concentricè leviter rugatâ, luteo-viridi, radiis duabus viridibus posticis pictâ, intus albâ, dentibus cardinalibus nullis, dentibus lateralibus laminatis; latere postico latè angulato, margine dorsali in alam latam elevato, margine terminali truncato, margine ventrali ante angulum sursum acclivi, medio subangulato; latere antico brevissimo, acuminato, angusto, umbonibus rotundis.*

THE HEAVY UNIO. Shell large, very inflated, wedge-shaped, winged, smooth, concentrically lightly wrinkled, yellowish-green, painted with two posterior green rays, white within, no cardinal teeth, lateral teeth laminar; posterior side widely angular, with dorsal margin elevated into a broad wing, terminal margin truncated, ventral margin in front of the angle sloping upwards, subangular in the middle; anterior side very short, acuminated, narrow, umboes rounded.

LEA on Unio, vol. vi. p. 12.

Hab. Siam.

A large, inflated, polished shell, of a fine apple-green colour.

Species 272. (Mus. Cuming in Brit.)

UNIO LAMELLATUS. *Un. testâ ovatâ, tenui, politissimâ, anticè olivaced, posticè viridi fasciatâ et biradiatâ, intus albidâ, dente cardinali inconspicuo, dentibus lateralibus nullis; latere postico obliquè angulato, termino subtruncato, margine dorsali recto, margine ventrali posticè sursum acclivi, medio convexo; latere antico brevi, margine dorsali recto, termino rotundo.*

THE LAMELLATED UNIO. Shell ovate, thin, very polished, olive in front, banded and two-rayed with green behind, whitish inside, cardinal tooth inconspicuous, no lateral teeth; posterior side obliquely angular, truncated at the end, dorsal margin straight, ventral margin posteriorly sloping upwards, convex in the middle; anterior side short, with dorsal margin straight, end round.

LEA on Unio, vol. ii. t. 6. f. 15.

Hab. Bengal.

Species 273. (Mus. Cuming in Brit.)

UNIO PARAGUAYANA. *Un. testâ ovali-subrotundâ, crassâ, tumidâ, luteo-viridi et castaneâ, lævigatâ, intus albâ, dentibus cardinalibus in utrâque valvulâ uno; latere postico lato, truncato, angulato, margine dorsali elevato, subarcuato, margine ventrali rotundo; latere antico brevi, angusto, termino rotundo.*

THE PARAGUAY UNIO. Shell oval subrotund, thick, tumid, yellowish-green and chestnut, smooth, white within, one cardinal tooth in each valve; posterior side wide, truncated, angular, with the dorsal margin elevated, rather arched, ventral margin rounded; anterior side short, narrow, rounded at the end.

D'ORBIGNY, American Freshwater Shells.

Hab. South America.

A curious species, with hinge teeth of the *Monocondylea* form.

Species 274. (Mus. Cuming in Brit.)

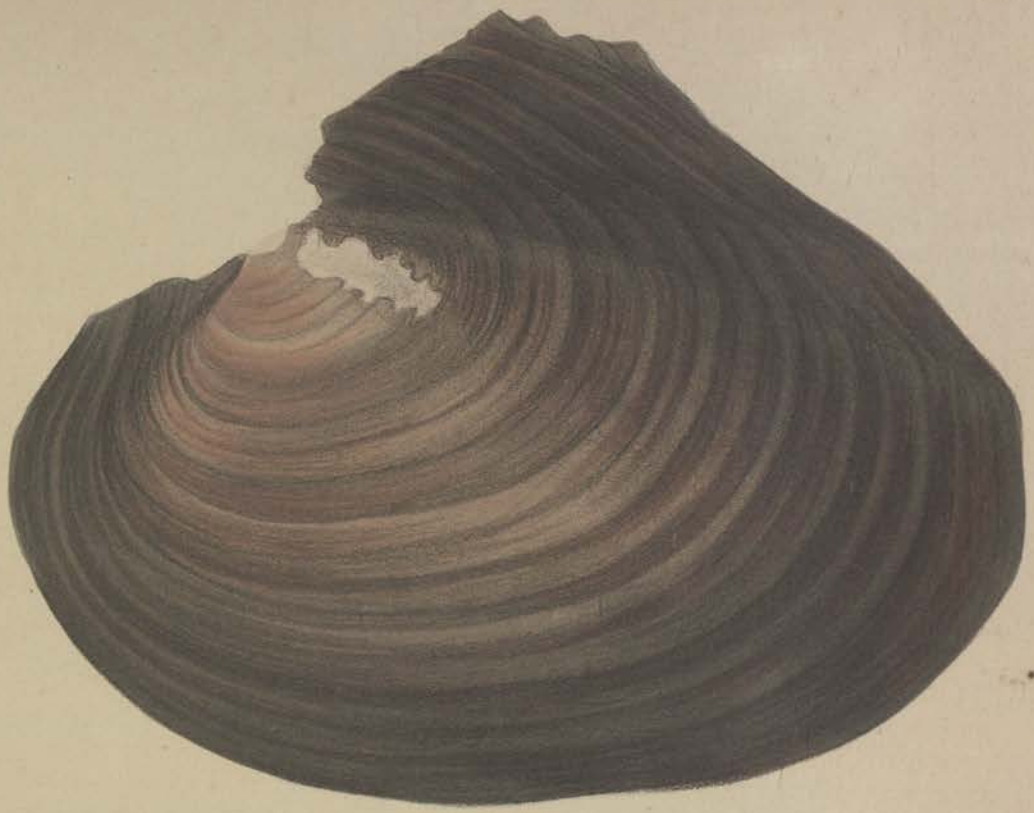
UNIO CAPAX. *Un. testâ rotundato-ovali, inflatâ, politâ, tenui, luteo-subviridi, obscurè interruptim radiatâ, intus albâ, dentibus cardinalibus magnis, irregulariter serratis, dentibus lateralibus latissimis; latere postico oblongo, tumido, supernè biangulato, margine dorsali brevi, concavo, termino subtruncato, margine ventrali medio rectiusculo; latere antico angusto, brevi, margine dorsali brevi, concavo, termino rotundo, umbonibus magnis, rotundis.*

THE CAPACIOUS UNIO. Shell roundly oval, inflated, polished, thin, yellowish-green, obscurely interruptedly rayed, white within, cardinal teeth large, irregularly serrated, lateral teeth very wide; posterior side oblong, tumid, biangulated above, dorsal margin short, concave, the end subtruncated, ventral margin rather straight in the middle; anterior side narrow, short, dorsal margin short, concave, rounded at the end, umboes large, round.

GREEN, ——?

Hab. United States.

This splendid shell is remarkable for the large size of the umboes and shortness of the somewhat concave dorsal line.



275.

Sowerby, del. et lith.

276.

Vincent Brooks, Imp.

UNIO.

PLATE LIII.

Species 275. (Mus. Cuming in Brit.)

UNIO DISCOIDEUS. *Un. testâ magnâ, tenui, inflatâ, alatâ, ovatâ, concentricè rugatâ, olivaceâ, intus purpureâ, cardine tenui, dentibus lateralibus laminatis; latere postico lato, inflato, obscurè biangulato, margine dorsali in alam elevatam expanso, termino inter angulos truncato, margine ventrali posticè sursum acclivi, medio rectiusculo; latere antico brevi, margine dorsali subalato, rectiusculo.*

THE DISCOID UNIO. Shell large, thin, inflated, winged, oval, concentrically wrinkled, olive, purple within, hinge thin, lateral teeth laminar; posterior side wide, inflated, obscurely biangular, dorsal margin expanded into an elevated wing, end truncated between the angles, ventral margin posteriorly sloping upwards, rather straight in the middle; anterior side short, dorsal margin slightly alated, rather straight.

LEA, Trans. Amer. Phil. Soc. vol. v. t. 11. f. 33.

Unio tenuis, Griffith.

Unio magnificus, Lea.

I cannot but regard the *Unio magnificus* as a variety of this species, although larger in size.

Species 276. (Mus. Cuming in Brit.)

UNIO NICKLINIANUS. *Un. testâ magnâ, latâ, crassâ, complanatâ, nigricanti, subcuneatâ, posticè obliquè angulato, rugis latis divaricatis undato, nodulis parvis rugato, anticè concentricè undato, nodulifero, intùs albo, margine cardinali lato, crasso; latere postico lato, margine dorsali alato, complanato, termino infrà truncato, margine ventrali convexo; latere antico brevi, acuminato, margine dorsali declivi, recto.*

NICKLIN'S UNIO. Shell large, wide, thick, flattened, blackish, subcuneate, obliquely angular behind, waved with wide, diverging wrinkles, roughened with small nodules, concentrically waved in front, noduliferous, white within, cardinal margin wide, thick; posterior side broad, dorsal margin winged, flattened, truncated beneath at the end, ventral margin convex; anterior side short, acuminated, dorsal margin sloping, straight.

LEA, Trans. Amer. Phil. Soc. vol. v. t. 1.

Hab. China.

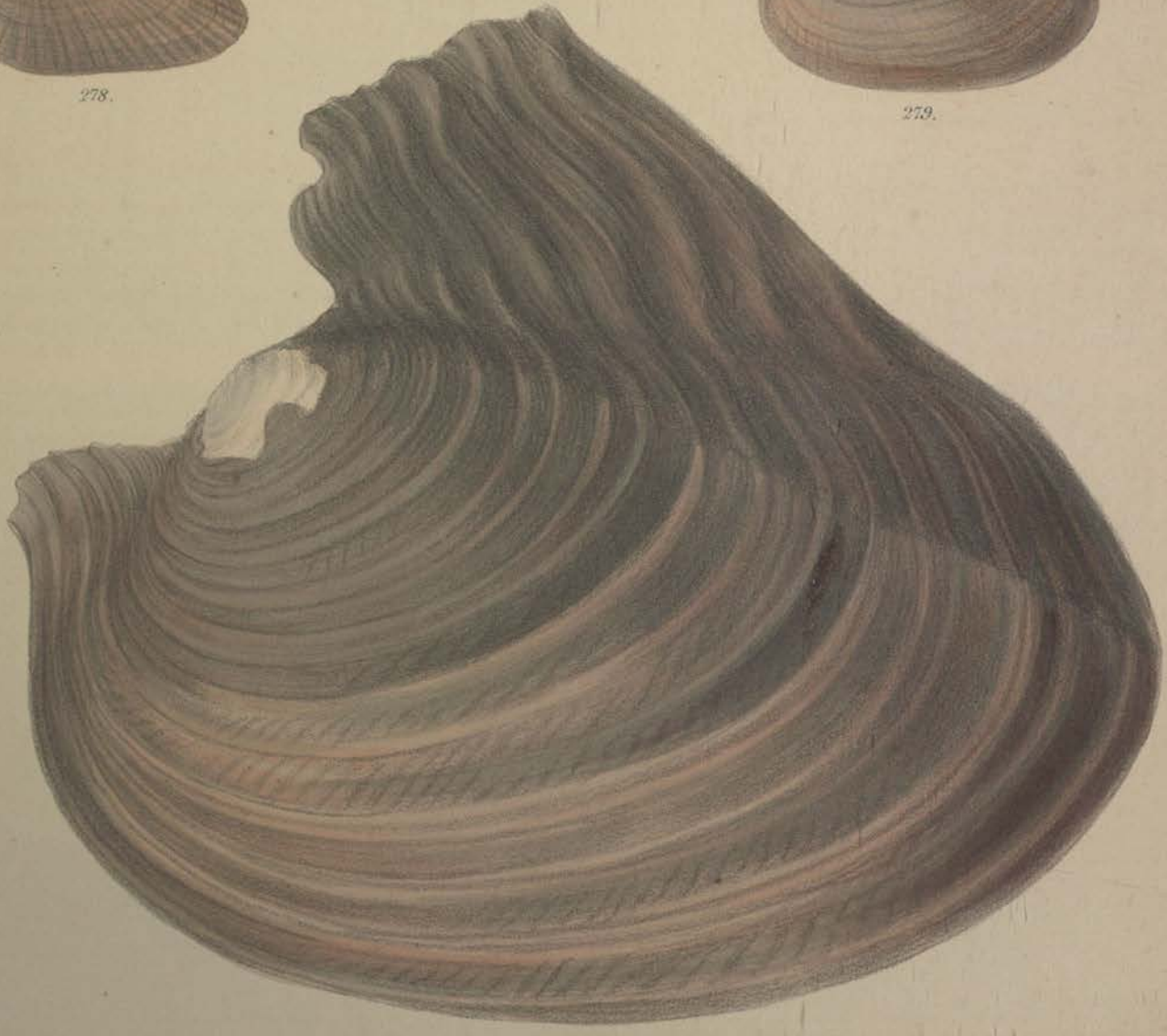
More truncated and cuneiform than *U. complanatus*. The sculpture much more rugose.

November, 1866.

277.

278.

279.



280.

Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE LIV.

Species 277. (Mus. Cuming in Brit.)

UNIO PERCOARCTATUS. *Un. testâ rhomboideâ, oblongâ, compressâ, epidermide fusco-nigrescenti indutâ, subrugosâ, intus purpureâ; latere postico oblongo, obliquè biangulato, medio contracto, termino truncato, margine dorsali elevato, recto, margine ventrali recto; latere antico brevissimo, subtruncato, margine dorsali brevi, recto.*

THE CONTRACTED UNIO. Shell rhomboidal, oblong, compressed, invested with blackish-brown epidermis, rather rough, purple within; posterior side oblong, obliquely biangular, contracted in the middle, truncated at the end, dorsal margin elevated, straight, ventral margin straight; anterior side very short, subtruncated, with dorsal margin short, straight.

LEA, MS. in Cum. Cab.

Hab. —— ?

The middle of this shell is much compressed.

Species 278. (Mus. Sowerby.)

UNIO CONRADICUS. *Un. testâ parvâ, solidâ, oblongâ, luteâ, viridi radiatâ, lævigatâ, intus albâ; latere postico oblongo, rotundatim obliquè angulato, termino basali acuminato, margine dorsali recto, lateraliter declivi, margine ventrali versus terminum paulo sursum acclivi, medio subcontracto; latere antico brevi, rotundo.*

CONRAD'S UNIO. Shell small, solid, oblong, yellow, rayed with green, smooth, white within; posterior side oblong, obliquely roundly angular, basal termination acuminated, dorsal margin straight, laterally sloping, ventral margin a little sloping upwards near the end, slightly contracted in the middle; anterior side short, round.

LEA, Trans. Amer. Phil. Soc. vol. v. t. 9. f. 23.

Hab. —— ?

Species 279. (Mus. Cuming in Brit.)

UNIO STUARTI. *Un. testâ oblongo-ovali, nitidâ, tenuissimâ, aureo-subviridi, intus albo-cærulescente, dentibus cardinalibus nullis, dentibus lateralibus tenuibus; latere postico latiusculo, termino subacuminato, obscurè angulato, margine dorsali recti; latere antico brevi, angusto, margine dorsali recto.*

STUART'S UNIO. Shell oblong-oval, smooth, very thin, golden-greenish, bluish-white within, cardinal teeth none, lateral teeth thin; posterior side rather wide, subacuminated at the end, obscurely angular, dorsal margin straight; anterior side short, narrow, dorsal margin straight.

ADAMS and ANGAS, Proc. Zool. Soc., 1863.

Hab. Port Jackson.

Species 280. (Mus. Cuming in Brit.)

UNIO PLICATUS. *Un. testâ magnâ, expansâ, cuneiformi, subcompressâ, bialatâ, lævigatâ, concentricè plicatâ, viridi-luteo et castaneo concentricè tæniatâ, intus albidâ; latere postico lato, obliquè angulato, elevatim alato, inter angulam et alam, et prope marginem alæ undatim plicato, margine ventrali convexo; latere antico brevi, alato.*

THE PLAITED UNIO. Shell large, expanded, wedge-shaped, rather compressed, with two wings, smooth, concentrically plaited, concentrically banded with green-yellow and chestnut, whitish within; posterior side wide, obliquely angular, with very high wing, plaited wavily between the angle and the wing, and near the margin of the wing, ventral margin concave; anterior side short, winged.

SAY, Encylopædia Americana.

Unio Peruvianus, Lamarck.

Unio rariplicatus, Lamarck.

Unio Dombeianus, Valenciennes.

Unio undulatus, Deshayes.

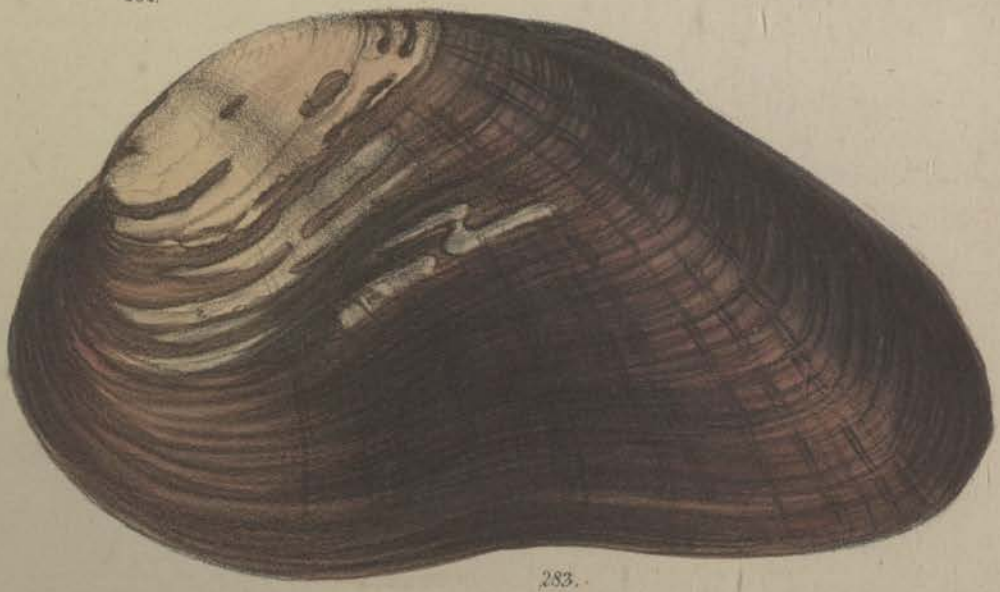
Unio multiplicatus, Deshayes.

Hab. China.

281.

282.

279.a.



283.

Sowerby, del et lith.

Vincent Brooks, Imp.

UNIO.

PLATE LV.

Fig. 279. (Mus. Angas.)

UNIO STUARTI. The specimen here figured, being full-grown, more completely indicates the characters of this species than that represented in Plate LIV.

Species 281. (Mus. Taylor.)

UNIO MEXICANUS. *Un. testâ ovatâ, compressâ, complanatâ, intùs extùsque ad umbones salmoneâ, intùs prope margines argenteâ, extùs epidermide olivaceâ indutâ; latere antico brevi, concentricè rugato; latere postico subrostrato, obliquè biangulato, margine dorsali convexo, margine ventrali æqualiter arcuato, dentibus crassis, umbonibus acuminatis.*

THE MEXICAN UNIO. Shell oval, compressed, flattened, salmon-tinted within and without at the umboes, silvery near the margins within, covered externally with an olive epidermis; anterior side short, concentrically wrinkled; posterior side subrostrated, obliquely biangular, with dorsal margin convex, ventral margin equally arched, teeth thick, umboes acuminated.

SOWERBY.

Hab. Mexico.

No species appears to have been hitherto described possessing the peculiar characters exhibited in this specimen. The salmon-tinted and silvery interior is very beautiful, and the flattened surface remarkable.

Species 282. (Mus. Angas.)

UNIO ANGASI. *Un. testâ oblongâ, subrhomboideâ, tenui, lævigatâ, epidermide obscurâ concentricè striatâ indutâ, intus cæruleâ, dentibus tenuibus laminatis; latere antico brevi, angusto, margine dorsali recto, subdeclivi, medio margine ventrali recto; latere postico lato, subangulato, margine dorsali elevato, rectiusculo, margine laterali obliquo, medio concavo, termino subtruncato, umbonibus lævibus, subdepressis.*

ANGAS'S UNIO. Shell oblong, subrhomboidal, thin, smooth, covered with a dark, concentrically striated epidermis, bluish within, with thin laminar teeth; anterior side short, narrow, with dorsal margin straight, rather sloping, middle with the ventral margin straight; posterior side wide, subangular, with dorsal margin elevated, rather straight, lateral margin oblique, concave in the middle, subtruncated at the end, umboes smooth, subdepressed.

LEA, MS.

Hab. Strangways River, North Australia.

Species 283. (Mus. Taylor.)

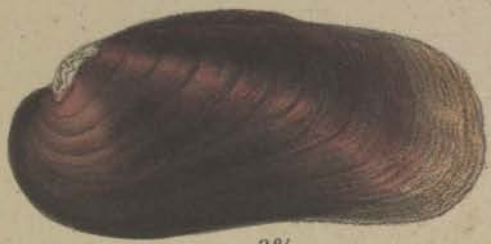
UNIO CAMELUS. *Un. testâ crassâ, ponderosâ, subreniformi, epidermide fuscâ, posticè lineis nigris radiatâ, indutâ, intùs albâ, margine cardinali incrassato, dentibus crassis; latere antico brevi, tumido, margine dorsali supernè elevato, deinde declivi, margine ventrali sursum acclivi, medio depresso, margine ventrali sinuato; latere postico lingulato, attenuato, obscurè angulato, termino acuminato, margine dorsali elongato, obliquè decliri, ligamento maximo.*

THE CAMEL UNIO. Shell thick, ponderous, rather kidney-shaped, covered with a brown epidermis, rayed posteriorly with black lines, white within, cardinal margin thickened, teeth thick; anterior side short, tumid, with dorsal margin elevated above, thence sloping, ventral margin sloping upwards, middle depressed, with ventral margin sinuated; posterior side tongue-shaped, attenuated, obscurely angular, acuminated at the end, dorsal margin elongated, obliquely sloping, ligament very large.

LEA, Amer. Phil. Trans. 5. t. 15. f. 45.

Hab. River Ohio.

A very ponderous species, with oblique, tongue-shaped termination; the dorsal margin is elevated into a swelling protuberance above the umboes.



284.

285.

286.

287.

Sowerby. del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE LVI.

Species 284. (Mus. Taylor.)

UNIO DECURVATUS. *Un. testâ subcylindraceâ, oblongâ, crassiusculâ, tumidâ, epidermide fusco-nigrescenti, striatâ, ad umbones rubrescenti lævigatâ indutâ, intùs albâ, dentibus laminatis; latere antico brevissimo, rotundato, medio subdepresso, margine recto, umbonibus undulatis, tumidis; latere postico subquadrato, subdecurvato, obliquè prope marginem dorsalem obscurè bicanaliculato, margine dorsali prope umbones recto, tum declivi, termino subtruncato.*

THE DECURVED UNIO. Shell subcylindrical, oblong, rather thick, tumid, covered with a blackish-brown striated epidermis, reddish and smooth near the umboes, white within, teeth laminar, anterior side very short, rounded; middle subdepressed, with straight margin, and the umboes undulated, tumid; posterior side rather square, slightly bent downwards, obliquely and obscurely bicanaliculated near the dorsal margin, dorsal margin straight near the umboes, thence sloping, end subtruncated.

ROSMASSLER.

Hab. Germany.

The cylindrical form of this shell, as well as its oblique double canal, subtruncated termination, and slight downward curvature, will make its recognition easy.

Species 285. (Mus. Angas.)

UNIO EVANSI. *Un. testâ rotundato-subquadratâ, tenui, depressâ, epidermide tenui, olivaceâ, tenuissimè striatâ, medio obscurissimè angulatim subsulcato; latere antico breviusculo, margine dorsali brevi, recto, margine laterali obliquo, margine ventrali sursum acclivi, medio subdepresso, umbonibus rotundatis; latere postico obliquè subquadrato, obscurè angulato, margine dorsali elevato, alato, margine laterali obliquo, termino infrà subproducto, dentibus laminiferis.*

EVANS'S UNIO. Shell rounded-subquadrated, thin, depressed, covered with thin, olivaceous, very finely striated epidermis, in the middle very obscurely marked with angular half-grooves; anterior side very short, dorsal margin short, straight, lateral margin oblique, ventral margin sloping upwards, middle slightly depressed, umboes rounded; posterior side obliquely subquadrated, obscurely angular, dorsal margin elevated, winged, lateral margin oblique, the end rather produced beneath, teeth laminar.

H. ADAMS and J. F. ANGAS, Pro. Zool. Soc. 1864.

Hab. Lagoon of the lower Murray River, South Australia, thin shell.

A rounded square, rather flattened.

Species 286. (Mus. Taylor.)

UNIO CHILENSIS. *Un. testâ ovatâ, tenuissimâ, viridi, metalliferâ, nitenti, intùs cinereâ, ad umbones costellis divergentibus acutis radiatâ; latere antico brevi, angustato, rotundato, ad marginem dorsalem cuneato; latere postico obliquè subangulato, producto, margine dorsali rectiusculo, margine laterali declivi, termino subtruncato, margine ventrali æqualiter convexo, dentibus laminatis, tenuibus.*

THE CHILIAN UNIO. Shell ovate, very thin, green, metallic, shining, ash-coloured within, rayed at the umboes with divergent acute riblets; anterior side short, narrow, rounded, cuneated at the dorsal margin; posterior side obliquely subangular, produced, with dorsal margin rather straight, lateral margin sloping, truncated at the end, ventral margin equally convex, teeth laminar, thin.

PARREYSS.

Hab. Chili.

M. Geale has also received this species from Portugal.

Species 287. (Mus. Taylor.)

UNIO GIGAS. *Un. testâ subtrigonâ, complanatâ, crassâ, divaricatim rugatâ, intùs subpurpureâ, dentibus crassis, extus epidermide nigrâ indutâ; latere antico brevissimo, angusto, margine ventrali sursum acclivi, medio prope umbones undulato, umbonibus depressis; latere postico magno, expanso, obliquè biangulato, margine dorsali elevato, alato, margine laterali declivi, termino inter angulos producto, truncato.*

THE GIANT UNIO. Shell subtrigonal, flattened, thick, divergently wrinkled, purplish inside, with thick teeth, covered outside with a black epidermis; anterior side very short, narrow, with ventral mar-

gin sloping upwards, middle undulated near the umboes, umboes depressed; posterior side large, expanded, obliquely biangular, dorsal margin elevated, winged, lateral margin sloping, end between the angles produced, truncated.

SWAINSON.

Hab. River Ohio.

This species differs from *U. complanatus* by its far more triangular and posteriorly-produced form

288.

289.

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291.

Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE LVII.

Species 288. (Mus. Taylor.)

UNIO DELODONTUS. *Un. testâ ovatâ, crassâ, tumidâ, lævigatâ, concentricè distanter rugatâ, epidermide olivaceo-fuscâ indutâ, intus opacâ, lacteâ; latere postico elongato, lato, arcuatim angulato, areâ postangulari angustâ, margine dorsali vix declivi, ligamento magno, termino subacuminato, margine ventrali æqualiter convexo; latere antico brevi, margine dorsali anticè subcuneato, termino rotundo, umbonibus lævibus.*

THE CONSPICUOUS-TOOTHED UNIO. Shell ovate, thick, tumid, smooth, concentrically distantly wrinkled, covered with an olive-brown epidermis, opake, white within; posterior side elongated, wide, with an arched angle, postangular area narrow, dorsal margin scarcely sloping, with large ligament, end subacuminated, ventral margin equally convex; anterior side short, with dorsal margin anteriorly subcuneate, end rounded, umboes smooth.

LAMARCK, Anim. sans vert.

Unio lacteolus, Lea.

Hab. La Plata.

One of the most ponderous species, of oval form.

Species 289. (Mus. Taylor.)

UNIO MAGNIFICUS. *Un. testâ compressâ, tenuissimâ, ovatâ, latâ, symphynotâ, lævi, viridi concentricè fasciatâ, fasciis viridibus, latis, subdivisis radiatâ; latere postico oblongo, expanso, margine dorsali recto, subalato, margine laterali obliquo, termino truncato, margine ventrali prope terminum valde sursum acclivi, medio producto, anticè subcontracto, ad terminum anticum elevato; latere antico angusto, supernè divaricatim sulcato, margine dorsali recto, umbonibus compressis, undulatim rugosis, dentibus lateralibus tenuibus, laminatis, dentibus cardinalibus nullis.*

THE MAGNIFICENT UNIO. Shell compressed, very thin, ovate, wide, symphynote, smooth, concentrically banded with green, rayed with broad green subdivided bands; posterior side oblong, expanded, dorsal margin straight, subalate, lateral margin oblique, end truncated, ventral margin much sloped upwards towards the end, produced in the middle, subcontracted in front, elevated at the anterior extremity; anterior side narrow, divergently sulcated above, dorsal margin straight, umboes compressed, undulately rugose, lateral teeth thin, laminar, cardinal teeth none.

LEA, Obs. on Unio, vol. i. p. 155. pl. 5. f. 14.

Hab. China.

Notwithstanding the general appearance of this shell and the thinness of the lateral teeth, it may yet be classed with other alate species in the genus *Unio*.

Species 290. (Mus. Taylor.)

UNIO FUNEBRALIS. *Un. testâ rotundo-subtrigonâ, valde inæquilaterali, crassâ (anticè præcipuè), epidermide nigrâ, striatâ, validâ indutâ, intus albo-subpurpureâ, olivaceo-nebulatâ; latere postico tumido, expanso, radiatim impresso, margine dorsali arcuatim elevato, areâ compressâ cuneatâ radiato, margine laterali rotundo, margine ventrali medio rectiusculo; latere antico brevissimo, supernè cuneato, depresso, umbonibus subterminalibus haud prominentibus, dentibus lateralibus elongatis, cardinalibus magnis laceratis.*

THE MOURNING UNIO. Shell rounded-subtrigonal, very inequilateral, thick (principally in front), covered with a black striated solid epidermis, purplish-white clouded with olive inside; posterior side tumid, expanded, radiately impressed, dorsal margin elevated in an arch, rayed with a compressed cuneate area, lateral margin rounded, ventral margin rather straight in the middle; anterior side very short, cuneate above, depressed, umboes subterminal, not prominent, lateral teeth long, cardinal teeth large, jagged.

LEA, Obs. on Unio, vol. x. p. 14. pl. 41. f. 286.

Unio nocturnis, Lea.

Hab. Uruguay, South America.

The specimen here figured is evidently older than either of those representing the two species in Lea's work; it is in consequence less smoothly and evenly rounded. Between Mr. Lea's two shells I do not think the differences of specific importance.

Species 291. (Mus. Taylor.)

UNIO TAMPICOENSIS. *Un. testâ subtrapezoideâ, tumidâ, crassâ, lævigatâ, epidermide validâ subpolitâ nigrâ indutâ, intus violaceâ; latere postico subquadrato,*

profundè angulato, margine dorsali paululum arcuato, decliri, margine laterali obliquo, termino subcuneato, margine ventrali plus minusve recto, umbonibus ovalibus, prominentibus, lævibus; latere antico brevi, angusto, margine dorsali cuneato, declivi, termino rotundo.

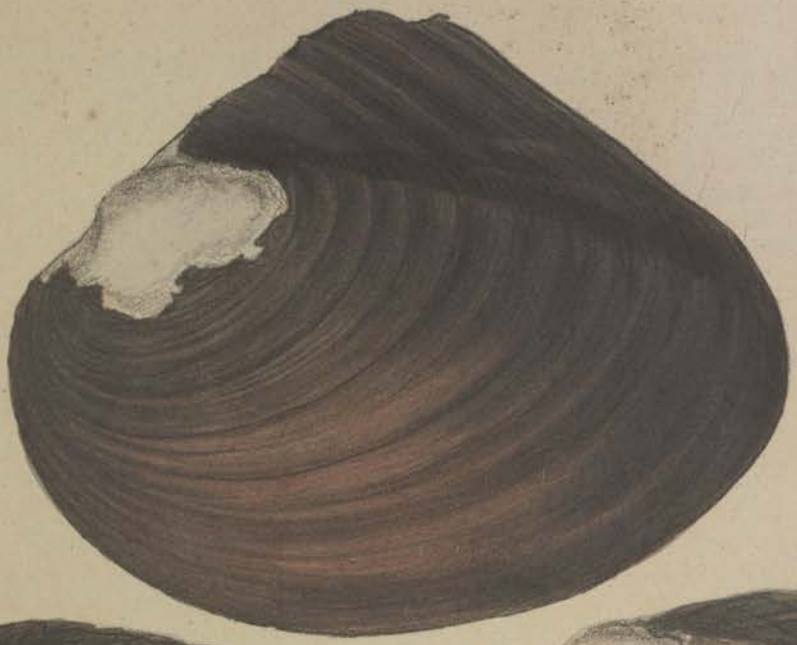
THE TAMPICO UNIO. Shell subtrapezoidal, tumid, thick, smooth, covered with a solid, rather smooth, black epidermis, violet within; posterior side subquadrate, with a deep angle, dorsal margin a little arched, sloping, lateral margin oblique, subcuneate at the end, ventral margin more or less straight, umboes oval, prominent, smooth; anterior side short, narrow, with the dorsal margin cuneate, sloped, end rounded.

LEA, Obs. on Unio, vol. ii. p. 24. pl. 7. f. 18.

Unio Tecomatensis, Lea, vol. iii. *ib.*

Hab. Tampico and Tecomate, in Mexico.

The latter of the two shells is a little shorter and less quadrate than the one figured, but this may be expected to vary in individuals.



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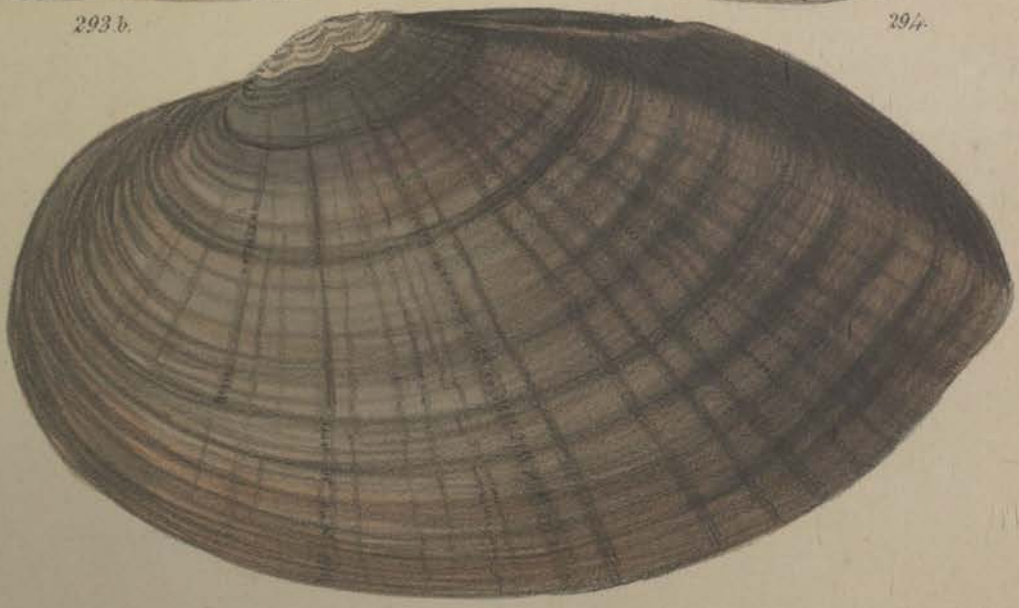
293 b.

294.



293 a.

Sowerby del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE LVIII.

Species 292. (Mus. Taylor.)

UNIO SUBTRIGONUS. *Un. testâ compressâ, solidâ, subtriangulari, alatâ, lævi, perobliquâ, olivaceo-fuscâ, intus albâ, suprà pallidè salmoneâ; latere postico suprà in alam elevatam cuneatam expanso, infrà ad terminum rotundato, margine ventrali æqualiter convexo; latere antico brevissimo, margine dorsali declivi, termino rotundo, umbonibus lævibus.*

THE SUBTRIGONAL UNIO. Shell compressed, solid, subtriangular, winged, smooth, very oblique, olive-brown, within white, with the upper part pale salmon; posterior side expanded above into an elevated cuneate wing, rounded beneath at the end, ventral margin equally convex; anterior side very short, with dorsal margin sloped, end rounded, umboes smooth.

SOWERBY.

Hab. Siam.

A certain equal convexity of surface and rotundity of marginal terminations gives this shell a different appearance from others of the winged group.

Species 293. (Fig. *a*, *b*, Mus. Taylor.)

UNIO LUTEOLUS. *Un. testâ oblongo-ovatâ, crassâ, convexâ, lævi, irregulariter concentricè rugatâ, epidermide tenui luteâ vel olivaceâ indutâ, viridi sparsim radiatâ; latere postico producto, obliquè angulato, margine dorsali rectiusculo, margine laterali obliquo, termino acuminato, margine ventrali utrinque sursum acclivi; latere antico breviusculo, rotundo, umbonibus undulatim rugatis, ligamento maximo.*

THE YELLOWISH UNIO. Shell oblong-ovate, thick, curved, smooth, irregularly concentrically wrinkled, covered with a thin yellowish or olive epidermis, rayed sparingly with green; posterior side produced, obliquely angular, dorsal margin rather straight, lateral margin oblique, end acuminated, ventral margin sloped upwards on both sides; anterior side rather short, rounded, umboes wrinkled in waves, ligament very large.

LAMARCK, Anim. sans vert. vol. v.

Unio siliquoides?, Barnes.

Unio inflatus?, Barnes.

Unio lienosus?, Conrad.

The large specimen figured shows the normal form of this species, which seems peculiarly subject to the variation of a ventricose and stunted posterior margin, which occurs in many species, and in many cases indicates the female from the shell, as represented at Fig. 6.

Species 294. (Mus. Taylor.)

UNIO CARIOSUS. *Un. testâ ovatâ, subinflatâ, solidâ, lævi, pallidè stramineâ, fusco fasciatâ, intus albâ; latere postico lato, obliquè angulato, subtrigono, margine dorsali elevato, margine laterali obliquo, termino acuminato, margine ventrali sursum acclivi, medio convexo; latere antico angusto, umbonibus rotundis, lævibus.*

THE DECAYED UNIO. Shell ovate, subinflated, solid, smooth, pale straw, banded with brown, white within; posterior side wide, obliquely angular, subtriangular, dorsal margin elevated, lateral margin oblique, end acuminated, ventral margin sloped upwards, convex in the middle; anterior side narrow, umboes round, smooth.

SAY, Enc. Am. Cat. t. 3. f. 2.

Unio ochraceus?, Say.

I do not perceive any appreciable difference in the two above-named species as represented by specimens that have come under my observation.

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Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

Plate LIX.

Species 295. (Mus. Taylor.)

Unio superbus. *Un. testâ subglobosâ, tenui, inflatâ, alatâ, stramineâ, posticè fasciis viridibus radiatâ, intus albido-subcæruleâ; latere postico inflato, expanso, profundè angulato, margine dorsali elevato, subcompresso, cuneato, margine laterali cuneato, termino ad angulum acuminato, margine ventrali ad angulum sursum acclivi, infrà angulato; latere antico angustato, subrugato, margine dorsali areâ complanatâ impresso, termino acuminato, subquadrato, margine ventrali longè sursum acclivi, umbonibus magnis, inflatis, subangulatis.*

The superb Unio. Shell subglobose, thin, inflated, alated, straw-coloured, rayed posteriorly with green bands, bluish-white within; posterior side inflated, expanded, with a deep angle, dorsal margin elevated, subcompressed, cuneate, lateral margin cuneate, end acuminated at the angle, ventral margin sloped upwards at the angle, angular beneath; anterior side narrow, rather wrinkled, dorsal margin impressed with a flat area, end acuminate, somewhat square, ventral margin sloped upwards for some length, umboes large, inflated, subangular.

Lea, Obs. on Unio, vol. iv. p. 32. pl. 42. f. 11.

Hab. New Holland.

Shorter, more inflated, and more globose than *U. gravidus*.

Species 296. (Mus. Taylor.)

Unio Congaræus. *Un. testâ subtrapezoideâ, complanatâ, lævigatâ, fuscâ, obscurè radiatâ, intus cupreâ; latere postico subquadrato, biangulato, angulo antico elevato, margine dorsali rectiusculo, termino inter angulos truncato; latere antico angustato, termino rotundo, margine dorsali depresso, declivi, margine ventrali recto, umbonibus lævibus, angulatis.*

The Congaree Unio. Shell subtrapezoidal, flattened, smooth, brown, obscurely rayed, copper-coloured within; posterior side squarish, biangular, front angle elevated, dorsal margin rather straight, end truncated between the angles; anterior side narrow, end rounded, dorsal margin depressed, sloped, ventral margin straight, umboes smooth, angular.

Lea, Obs. on Unio, vol. i. p. 82.

U. gibber, Lea? Caryferk river, Tennessee.

Hab. Congaree river, Columbia.

Species 297. (Mus. Taylor.)

Unio marginalis. *Un. testâ oblongo-ovatâ, tenui, lævissimâ, subinflatâ, epidermide fusco-nigrescenti nitenti indutâ, intus pallidè fulvâ iridescenti; latere postico rotundatim angulato, producto, margine dorsali recto, margine laterali obliquo, termino subacuminato, margine ventrali versus terminum elevato, medio vix contracto; latere antico brevi, angusto, margine dorsali subdeclivi, cuneato, umbonibus lævibus.*

The marginal Unio. Shell oblong-ovate, thin, very smooth, somewhat inflated, covered with a blackish-brown shining epidermis, pale iridescent-fawn within; posterior side roundly angular, produced, dorsal margin straight, lateral margin oblique, end subacuminated, ventral margin raised towards the end, very slightly contracted in the middle; anterior side short, narrow, dorsal margin slightly sloped, cuneate, umboes smooth.

Lamarck, Anim. sans vert., Unio, n. 41.

Hab. Bengal.

This species is remarkable for the shining smoothness of the epidermis.

Species 298. (Mus. Taylor.)

Unio dolabræformis. *Un. testâ globoso-subtrigonâ, crassâ, inflatâ, lævigatâ, olivaceâ, viridi (posticè præcipuè) radiatâ, intus albâ vel roseâ; latere postico inflato, expanso, elevatim angulato, margine dorsali elevato, brevi, margine laterali obliquo, termino subacuminato, margine ventrali ad terminum elevato, infrà subangulato, medio convexo; latere antico angusto, margine dorsali depresso, brevi, cuneato, margine ventrali versus terminum gradatim acclivi, umbonibus maximis, rotundis, lævibus.*

The hatchet-shaped Unio. Shell globose-subtrigonal, thick, inflated, smooth, olive, rayed (principally at the back) with green, white or pink within; posterior side inflated, expanded, with an elevated angle, dorsal margin raised, short, lateral margin oblique, end subacuminated, ventral margin raised at the end, slightly angular beneath, convex in the middle; anterior side narrow, dorsal margin depressed, short, cuneate, ventral margin gradually rising towards the end, umboes very large, rounded, smooth.

Lea, Obs. on Unio, vol. ii. p. 103. t. 24. f. 113.

Unio excavata?, Lea.

Hab. Georgia.

There is a rather close resemblance between this species and *Unio ventricosus* of Barnes. It is indeed quite possible they may be the same, although the posterior angle is much stronger in the former than in latter.

293.

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Sowerby del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE LX.

Species 299. (Mus. Taylor.)

UNIO CONFRAGOSUS. *Un. testâ magnâ, solidâ, oblongo-subquadratâ, inflatâ, undulatâ et tuberculatâ, epidermide viridi lævigatâ concentricè strigosâ indutâ; latere postico rotundatim angulato, rugis magnis obliquis divaricatis et prope umbones tuberculis elevatis lateraliter sulcatis asperato; latere antico prope umbones tuberculato et divaricatim sulcato, prope marginem lævigato, umbonibus in seriebus duabus tuberculatis, inter tubercula subplanatis.*

THE RUGGED UNIO. Shell large, solid, oblong-subquadrate, inflated, waved and tuberculated, covered with a green, smooth, concentrically-striped epidermis; posterior side roundly angular, roughened by large oblique diverging wrinkles and near the umboes elevated tubercles sulcated at the sides; anterior side tuberculated and divergently sulcated near the umboes, smooth towards the margin, umboes tuberculated in two rows, subplanulate between the tubercles.

SAY, American Conchology, t. 21.

Hab. North America.

There are several other species characterized by a double row of tubercles towards the umboes, but they are not, like this, of an oblong form.

Species 300. (Mus. Sowerby.)

UNIO CYLINDRICUS. *Un. testâ elongatâ, cylindraceâ, crassâ, ponderosâ, lævigatâ, valde inæquilaterali, stramineâ, maculis viridibus angulatis aspersâ; latere postico profundè angulato, ad angulum tuberculis magnis rotundis arcuato, post angulum divaricatim undulato et tuberculato, margine dorsali elongato, recto, margine laterali subobliquo, termino acuminato, margine ventrali ad terminum elevato, medio paululum contracto; latere antico brevissimo, subtruncato, umbonibus prominentibus, undatim tuberculiferis.*

THE CYLINDRICAL UNIO. Shell elongated, cylindrical, thick, heavy, smooth, very inequilateral, straw-coloured, sprinkled with angular green spots; posterior side deeply angular, armed at the angle with large round tubercles, divergently undulated and tuberculated behind the angle, dorsal margin elongated, straight, lateral margin rather oblique, end acuminated, ventral margin elevated at the end, slightly contracted in the middle; anterior side very short, subtruncated, umboes prominent, wavily tuberculiferous.

SAY, Enc. Amer.

Unio naviformis, Lamarck.

Hab. River Ohio.

Species 301. (Mus. Taylor.)

UNIO JAYENSIS. *Un. testâ sublanceolatâ, moderatè convexâ, solidâ, striatâ, olivaceâ, posticè nigrescente, intus et ad umbones olivaceo nebulatâ; latere postico producto, recto, biangulato, acuminato, margine dorsali recto, margine laterali obliquo, termino truncato, margine ventrali usque ad medium recto; latere antico brevi, subacuminato, margine ventrali sursum acclivi.*

JAY'S UNIO. Shell sublanceolate, moderately convex, solid, striated, olivaceous, blackening posteriorly, clouded with olive within and at the umboes; posterior side produced, straight, biangular, acuminated, dorsal margin straight, lateral margin oblique, end truncated, ventral margin straight at the middle; anterior side short, subacuminated, ventral margin sloped upwards.

LEA, Obs. on Unio, vol. ii. p. 28. pl. 2. f. 23.

Unio æquilus?, Lea, vol. vi.

Unio Maconensis?, ibid.

Unio naviculoides?, ibid.

It is quite possible that distinctions may be pointed out between the above species, but probably they are not greater than those which constantly occur between individuals and varieties of the same race.

Species 302. (Mus. Taylor.)

UNIO RUGOSUS. *Un. testâ magnâ, ellipticâ, crassâ, subcompressâ, stramineâ, viridi radiatâ, lævigatâ, intus albâ et pallidè salmoneâ; latere postico producto, angulato, post angulum divaricatim rugato, ante angulum obliquè sulcato et tuberculato, margine dorsali subconvexo, termino subtruncato, margine ventrali convexo; latere antico subacuminato, lævigato, umbonibus parvis, acuminatis, undulatim tuberculatis.*

THE RUGOSE UNIO. Shell large, elliptical, thick, subcompressed, straw-coloured, rayed with green, smooth, white and pale salmon-tinted within; posterior side produced, angular, divergently wrinkled behind the angle, obliquely sulcated and tuberculated in front of the angle, dorsal margin a little convex, end subtruncated, ventral margin convex; anterior side subacuminated, smooth, umboes small, acuminated, undulately tuberculated.

BARNES, Silliman's Journal, vol. vi. t. 13. f. 21.

Unio abducta, Say.

Hab. North America.

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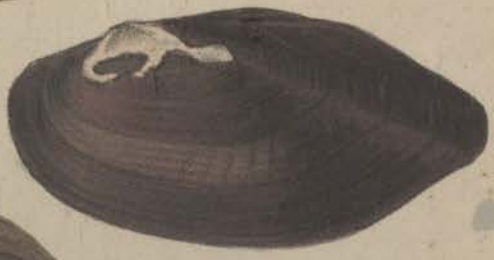

308.

309.

Sowerby, del et lith.

Vincent Brooks, Imp.

UNIO.

PLATE LXI.

Species 303. (Mus. Taylor.)

UNIO COMPRESSUS. *Un. testâ tenui, compressâ, latâ, subcuneatâ, lævigatâ, luteâ, fasciis latis et alteris angustis viridibus radiatâ, intus lacteâ, dentibus lateralibus laminatis, anticis brevibus, posticis elongatis, dentibus cardinalibus obliquis; latere postico lato, subtumido, supra alato; latere antico angusto, brevi, umbonibus undulatim tuberculatis.*

THE COMPRESSED UNIO. Shell thin, compressed, broad, subcuneate, smooth, yellowish, rayed with green bands, some broad and others narrow, white within, lateral teeth laminated, anterior short, posterior elongated, cardinal teeth oblique; posterior side broad, slightly tumid, winged above; anterior side narrow, short, umboes tuberculated in waves.

LEA on Unio, vol. i. pl. 20. f. 22.

Hab. Ohio.

The specimen from which our figure is taken corresponds with the original figure and description of Lea in every respect, including the very peculiar teeth and umbones. It is the only specimen I have seen that will so correspond, although the name is attached to shells in various collections.

Species 304. (Mus. Sowerby.)

UNIO SECURIS. *Un. testâ crassâ, compressâ, obliquè subtrigonâ, luteâ, fasciis maculiferis subviridibus radiatâ, intus lacteâ, dentibus crassis; latere postico cuneato, usque ad marginem ventralem arcuatim declivi et angulato, post angulum deflecto; latere antico brevissimo, umbonibus acutis, incurvis, margine ventrali posticè acuminato, anticè rotundo.*

THE HATCHET UNIO. Shell thick, compressed, obliquely subtrigonal, yellow, rayed with greenish spotted bands, white within, teeth thick; posterior side cuneate, sloped convexly to the ventral margin and angulated, turned down behind the angle; anterior side very short, umboes sharp, incurved, ventral margin posteriorly acuminated, rounded in front.

LEA on Unio, vol. i. p. 51. pl. 11. f. 27.

Unio depressus, Rafinesque.

Hab. River Ohio.

This species is very distinct from all others.

Species 305. (Mus. Sowerby.)

UNIO PLENUS. *Un. testâ crassâ, altâ, tumidâ, obliquè subtrigonâ, castaneâ, lævigatâ, distanter concentricè fasciatâ et leviter sulcatâ, intus salmoneâ, margine cardinali et dentibus crassis; latere postico obliquè angulato, post angulum angusto, margine dorsali declivi, termino basali subacuminato, margine ventrali ante angulum subexcavato, medio tumido, umbonibus elevatis, distantibus, incurvis; latere antico brevissimo, margine dorsali recto, cuneato, margine laterali recto, margine ventrali sursum accliví.*

THE PLUMP UNIO. Shell thick, elevated, tumid, obliquely subtrigonal, chestnut-coloured, smooth, distantly concentrically banded and slightly grooved, salmon-coloured within, cardinal margin and teeth thick; posterior side obliquely angular, narrow behind the angle, dorsal margin sloped, basal end slightly acuminated, ventral margin subexcavated in front of the angle, middle tumid, umboes elevated, distant, curved inwards; anterior side very short, with dorsal margin straight, cuneate, lateral margin straight, ventral margin sloped upwards.

LEA Obs. on Unio, vol. i. p. 119. pl. 16. f. 39.

Hab. Tennessee river.

Differing from *U. plenus* in altitude from umboes to ventral margin, and in the more produced posterior basal terminus.

Species 306. (Mus. Taylor.)

UNIO MULTIRADIATUS. *Un. testâ ovatâ, inflatâ, solidâ, subaurantiâ, fasciis viridibus latiusculis lineatim divisis radiatâ, intus lacteâ; latere postico lato, valde inflato, margine dorsali elevato, alæformi, recto, cuneato, margine ventrali angulatim sursum accliví; latere antico rotundo, umbonibus inflatis, lævibus.*

THE MANY-RAYED UNIO. Shell ovate, inflated, solid, slightly orange, rayed with rather wide green bands, divided in lines, milk-white within; posterior side wide, much inflated, dorsal margin elevated, wing-shaped, straight, cuneate, ventral margin angularly sloped upwards; anterior side rounded, umboes inflated, smooth.

LEA, Obs. on Unio, vol. i. pl. 10. f. 3.

Hab. River Ohio.

The inflated and somewhat alate posterior side gives this shell a different aspect to that of *Unio radiatus*, Lamk.

Species 307. (Mus. Sowerby.)

UNIO AFFINIS. *Un. testâ tenui, ovatâ, pallidè olivaceâ, lævigatâ, obscurè flavidâ, lineis viridibus angustis posticè et anticè crebris, medio distantibus radiatâ, intus salmoneâ et cærulescenti, dentibus cardinalibus compressis et laceratis; latere postico lato, obscurè biangulato, super et post angulos concentricè rugato, margine dorsali elevato, areâ postangulari compressâ, subalatâ, margine ventrali inflato, umbonibus perobliquis; latere antico brevi, angustato.*

THE RELATED UNIO. Shell thin, ovate, pale olive, smooth, dull yellow, rayed with narrow green lines, which are close before and behind, and distant in the middle, salmon and bluish within, with cardinal teeth compressed and jagged; posterior side wide, obscurely biangulated, concentrically wrinkled upon and behind the angles, dorsal margin elevated, postangular area compressed, subalate, ventral margin inflated, umboes very oblique; anterior side short, gradually narrowed.

LEA, Obs. on Unio, vol. v. p. 27. pl. 19. f. 26.

Hab. Alexandria, Louisiana; Dr. Hall.

Species 308. (Mus. Sowerby.)

UNIO VAUGHANIANUS. *Un. testâ elongatâ, tenuiusculâ, subcomplanatâ, olivaceâ, lævigatâ, intus albido-cæruleâ, dentibus cardinalibus duobus et uno, compressis, laceratis, lateralibus duobus et uno laminatis; latere postico producto, obliquè biangulato, acuminato, subrostrato, margine ventrali ante angulum concavo, versus medium convexo; latere antico brevi, suprà obtusè cuneato.*

VAUGHAN'S UNIO. Shell elongated, rather thin, rather flat, olive, smooth, bluish-white within, cardinal teeth two and one, compressed, ragged, lateral teeth two and one; posterior side produced, obliquely biangular, acuminated, subrostrated, ventral margin concave in front of the angle, convex towards the middle; anterior side short, obtusely cuneate above.

LEA, Obs. on Unio, vol. ii. p. 28. pl. 9. f. 23.

Hab. Sawney's Creek.

Species 309. (Mus. Taylor.)

UNIO LINEATUS. *Un. testâ subcuneiformi, altâ, inflatâ, solidâ, politâ, viridi-flavescenti, lineis distantibus, viridi-nigrescentibus radiatâ, intus lacteâ; latere postico elevatim angulato, lato, obliquè subquadrato, margine ventrali æqualiter convexo, umbonibus undulatis, prominentibus; latere antico brevi, angustiore, ante umbones excavato.*

THE LINEATED UNIO. Shell subcuneiform, elevated, inflated, solid, polished, greenish-yellow, rayed with distant blackish-green lines, white within; posterior side with an elevated angle, wide, obliquely subquadrate, ventral margin equally convex, with umboes undulating, prominent; anterior side short, rather more narrow, excavated in front of the umboes.

LEA, Obs. on Unio, vol. iii. p. 44. pl. 12. f. 20.

Hab. Chattahoochee river, Columbus, Georgia; Dr. Boykin.

310.

311.

312.

Sowerby, del et lith.

Vincent Brooks Imp.

UNIO.

PLATE LXII.

Species 310. (Mus. Sowerby.)

UNIO DISCUS. *Un. testâ oblongo-cuneatâ, ponderosâ, concentricè rugatâ, nigrâ, intus purpureâ, margine cardinali crasso, dentibus posticis laminatis, anticis crassissimis, laceratis; latere postico obliquè angulato, gradatim angustato, margine dorsali declivi, termino truncato, medio inflato; latere antico brevissimo, margine ventrali anticè inflato, posticè ante angulum subexcavato, umbonibus tumidis prominentibus.*

THE DISK UNIO. Shell oblong-cuneate, ponderous, concentrically wrinkled, black, purple within, cardinal margin thick, posterior teeth laminated, anterior very thick, jagged; posterior side obliquely angular, gradually narrowed, dorsal margin sloped, the end truncated, middle inflated; anterior side very short, ventral margin anteriorly inflated, posteriorly in front of the angle slightly excavated, umboes tumid, prominent.

LEA, Obs. on Unio, vol. ii. p. 74. pl. 18. p. 57.

Hab. India.

Species 311. (Mus. Taylor.)

UNIO SINUATUS. *Un. testâ elongatâ, reniformi, arcuatâ, crassâ, nigrescenti, ad umbones rufo-fuscatâ, intus albâ, dentibus crassis, laceratis; latere postico arcuatim declivi, tumido, termino subrotundo, medio depresso, ad marginem ventralem hiante profundè sinuato, umbonibus tumidis, prominentibus, tenuiter undulatis, margine ventrali et termino rotundatis.*

THE SINUATED UNIO. Shell elongated, reniform, arched, thick, blackish, reddish-brown at the umboes, white within, teeth thick, lacerated; posterior side sloped with a curve, tumid, subrotund at the end, middle depressed, gaping, deeply sinuated at the ventral margin, umboes tumid, prominent, finely undulated, ventral margin and end rounded.

LAMARCK, Anim. sans vert., Unio, sp. 1.

Unio Roissyi? et *Unio elongatus*, Michaud.

Hab. Rivers of Europe.

It seems to me that this thick, arched shell differs materially from the compressed and differently-formed *Unio margaritiferus*. The umboes are tumid and prominent, and undulated, while in the British species they are flat, and scarcely produced beyond the dorsal outline. The anterior side rounded and full, instead of being narrowed and compressed; the sinus is deep, and the hiatus wide; while the posterior terminus is rounded instead of being acuminated.

Species 312. (Mus. Sowerby.)

UNIO CRASSIDENS. *Un. testâ ovato-subtrapezoideâ, ponderosâ, prope medium subtuberculatâ, rugosâ, nigrescenti, intus albâ, crassâ, dentibus magnis, laceratis; latere postico arcuatim biangulato, inter angulos truncato, margine dorsali declivi, ligamento prominenti, elongato, umbonibus subterminalibus, anticè declivi; latere antico brevissimo, subrotundo.*

THE THICK-TOOTHED UNIO. Shell ovate, tending to trapezoidal, ponderous, slightly tuberculated towards the middle, rugose, blackish, within white, thick, teeth large, jagged; posterior side with two arched angles, truncated between the angles, dorsal margin sloped, ligament prominent, elongated, umboes subterminal, sloped in front; anterior side very short, rather round.

LAMARCK, Anim. sans vert., Unio, no. 3.

Hab. Ohio River, Mississippi.

This species varies in form, some specimens being more oval, with the umboes more sloped down towards the short anterior.

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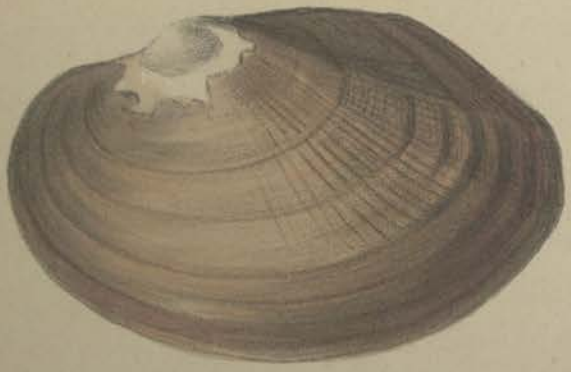

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Sowerby. del. et lith.

Vincent Brooks, Imp

UNIO.

PLATE LXIII.

Species 313. (Mus. Sowerby.)

UNIO SCOBINATUS. *Un. testâ ovato-cylindraceâ, angustâ, tumidâ, nigrescenti, tuberculis et costellis tuberculatis divaricatis rugatâ, intus pallidè salmoneâ, dentibus parvis; latere postico producto, marginibus dorsali et laterali arcuatim declivibus, termino acuminato, margine ventrali rectiusculo; latere antico brevi, subrotundo, umbonibus plenis.*

THE SCULPTURED UNIO. Shell ovate-cylindrical, narrow, tumid, blackish, wrinkled with tubercles and tuberculated diverging ribs, within pale-salmon, with small teeth; posterior side produced, dorsal and lateral margins sloped in a curve, end acuminated, ventral margin rather straight; anterior side short, rather rounded, umboes full.

LEA, Obs. on Unio, vol. vi. p. 19. pl. 26. f. 13.

Hab. Siam.

Species 314. (Mus. Sowerby.)

UNIO ORIENS. *Un. testâ elongatâ, subovatâ, tenui, subcompressâ, pallidè viridi, obliquè anticè et medio fasciis obliquis et post angulum fasciâ latâ, radiatâ, intus albidâ, dentibus tenuibus; latere postico obliquè angulato, margine dorsali brevi, recto, margine laterali obliquo, termino acuminato, margine ventrali inflato; latere antico subproducto, margine dorsali recto, cuneato, umbonibus tenuiter lirato-undatis.*

THE RISING SUN UNIO. Shell elongated, subovate, thin, subcompressed, pale green, rayed with oblique bands in the front and centre, and one broad behind the angle, white within, teeth thin; posterior side obliquely angular, dorsal margin short, straight, lateral margin oblique, end acuminated, ventral margin inflated; anterior side somewhat produced, dorsal margin straight, cuneate, umboes finely undulately ridged.

LEA, Obs. on Unio, vol. i. p. 85. pl. 6. f. 1.

Hab. River Ohio.

The fine linear character of the undulations on the umboes, and the elongated, depressed form, distinguish this shell sufficiently from *Unio pictorum*.

Species 315. (Mus. Hanley.)

UNIO PREVOSTIANUS. *Un. testâ compressâ, subovatâ, olivaceâ, fasciis viridibus irregularibus interruptis anticè tenuibus posticè latioribus radiatâ, intus cæruleâ, dentibus anticis tenuibus, posticis nullis; latere postico lato, expanso, oblongo, margine dorsali subarcuato, termino subrotundo, margine ventrali inflato, medio angustato, umbonibus compressis, cupreis, lævigatis; latere antico angustato, breviusculo, rotundo.*

PREVOST'S UNIO. Shell compressed, subovate, olive, rayed with green, irregular, interrupted bands, which are anteriorly thin, posteriorly wide, inside blue, with thin anterior and no posterior teeth; posterior side broad, expanded, oblong, dorsal margin slightly arched, end rather round, ventral margin inflated, middle narrow, umboes copper-coloured, smooth; anterior side narrow, rather short, round.

LEA, Obs. on Unio, vol. v. p. 25. pl. 19. f. 24.

Hab. Eutowah river, Georgia.

Species 316. (Mus. Sowerby.)

UNIO PICTUS. *Un. testâ rectâ, oblongo-ellipticâ, solidâ, tumidâ, lævigatâ, anticè concentricè rugatâ, obscurè stramineâ, radiis obliquis interruptis pictâ, intus anticè crassâ, albâ, posticè tenui iridescenti, dentibus solidis; latere postico elongato, termino acuminato, margine ventrali æqualiter convexo, umbonibus lævibus, haud prominentibus; latere antico rotundato.*

THE PAINTED UNIO. Shell straight, oblong-elliptical, solid, tumid, smooth, concentrically wrinkled in front, dull straw-colour, painted with oblique interrupted rays, inside thick in front, white, thin iridescent posteriorly, teeth solid; posterior side lengthened, end acuminated, ventral margin equally convex, umboes smooth, not prominent; anterior side rounded.

LEA, Obs. on Unio, vol. i. p. 185. pl. 11. f. 32.

Hab. Harpeth river, Tennessee.

Species 317. (Mus. Taylor.)

UNIO OCHRACEUS. *Un. testâ ovatâ, tenui, inflatâ, lævi-*

gatâ, pallidè ochraceâ, posticè lineis viridibus paucis radiatâ, intus pallidè salmoneâ, dentibus laminatis; latere postico obscurè biangulato, margine dorsali subalatâ, declivi, termino acuminato, margine ventrali convexo, ad terminum validè sursum acclivi, umbonibus inflatis; latere antico hianti, rotundo, margine dorsali ante umbones excavato, ventrali sursum acclivi.

THE OCHRACEOUS UNIO. Shell ovate, thin, inflated, smooth, pale yellow, rayed posteriorly with few green lines, pale salmon within, teeth laminar; posterior side obscurely biangular, dorsal margin subalate, sloped, end acuminated, ventral margin convex, strongly sloped upwards at the end, umboes inflated; anterior side gaping, rounded, dorsal margin excavated in front of the umboes, ventral margin sloped upwards.

SAY, Nicholson's Encyclopædia, Art. Am. Conch., pl. 9. f. 8.

Unio crocatus, Lea.

Hab. Rivers Georgia, Schuylkill, Delaware, Savannah.

Figure 318. (Mus. Sowerby.)

UNIO AFFINIS, *var.* This shell, figured under the impression that it was distinct, appears to bear so close a resemblance to *U. affinis*, that I cannot venture to give it a name.

Species 319. (Mus. Sowerby.)

UNIO CURREYANA. *Un. testâ parvâ, solidâ, oblongâ, subroseâ aut salmoneâ, concentricè tenuiter rugatâ, prope umbones rugis magnis obliquè undatâ, posticè radiis olivaceis pictâ; latere postico oblongo, bilobato, inter lobas concavo, margine dorsali declivi, medio convexo, termino acuminato, lobâ anticâ rotundâ, margine ventrali ante lobam contracto; latere antico subproducto, margine dorsali declivi.*

CURREY'S UNIO. Shell small, solid, oblong, roseate or salmon-tinted, concentrically finely wrinkled, obliquely undulated near the umboes with large wrinkles, painted posteriorly with olive rays; posterior side oblong, bilobed, dorsal margin sloped, convex in the middle, acuminated at the end; anterior lobe rounded, ventral margin contracted in front of the lobe; anterior side rather produced, dorsal margin sloped.

LEA, Obs. on Unio, vol. iii. p. 61. pl. 18. f. 40.

Hab. Stone's River, Tennessee; Dr. Currey of Nashville.

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Sowerby, del. et. lith.

Vincent Brooks, Imp.

UNIO.

PLATE LXIV.

Species 320. (Mus. Sowerby.)

UNIO ARATUS. *Un. testâ parvâ, ovatâ, solidâ, pallidè olivaceâ, concentricè tenui-liratâ, intus albâ; latere postico producto, arcuatim angulato, margine dorsali convexo, termino centrali, acuminato, margine ventrali sursum acclivi; latere antico brevi, prope marginem lævigato, umbonibus parvis, haud prominentibus.*

THE PLOUGHED UNIO. Shell small, oval, solid, pale olive, concentrically finely ribbed, white within; posterior side produced, with a curved angle, dorsal margin convex, end central, acuminated, ventral margin sloped upwards; anterior side short, smooth near the margin, umboes small, not prominent.

LEA, Obs. on Unio, vol. iv. pl. 42. f. 12.

Hab. —— ?

Species 321. (Mus. Sowerby.)

UNIO SUBGLOBOSUS. *Un. testâ solidâ, ovato-subrotundâ, sublævigatâ, tumidâ, epidermide nigrescenti indutâ, intus salmoneâ, margine cardinali arcuato, dentibus laceratis; latere postico producto, angulato, margine dorsali declivi convexo, termino basali acuminato, margine ventrali ante angulum contracto, tum convexo; latere antico brevi, rotundo, umbonibus tumidis, haud prominentibus.*

THE SUBGLOBOSE UNIO. Shell solid, ovato-subrotund, rather smooth, tumid, covered with a blackish epidermis, salmon-tinted within, hinge margin arched, teeth jagged; posterior side produced, angular, dorsal margin sloped, convex, basal end acuminated, ventral margin contracted in front of the angle, then convex; anterior side short, round, umboes tumid, not prominent.

LEA, Obs. on Unio, vol. i. p. 142. pl. 2. f. 3.

Hab. Bayon Teche, Louisiana.

This species is one of the most subglobose in form.

Species 322. (Mus. Sowerby.)

UNIO TRIGONUS. *Un. testâ subcompressâ, subtrigonâ, crassâ, sublævigatâ, fusco-olivaceâ, intus albâ, dentibus magnis laceratis, umbonibus undatis, prominentibus; latere postico subquadrato, angulato, margine dorsali et laterali declivibus, termino basali subtruncato, areâ postangulari depressâ, margine ventrali ante angulum subcontracto, medio subdepresso; latere antico brevi, declivi.*

THE TRIGONAL UNIO. Shell subcompressed, subtrigonal, thick, rather smooth, olive-brown, white within, with large jagged teeth, umboes undulated, prominent; posterior side subquadrate, angular, dorsal and lateral margins sloped, basal end subtruncated, postangular area depressed, ventral margin contracted in front of the angle, middle subdepressed; anterior side short, sloped.

LEA, Obs. on Unio, vol. i. p. 120. pl. 16. f. 40.

Hab. Ohio river, at Cincinnati, and Louisville.

Species 323. (Mus. Sowerby.)

UNIO PYRAMIDATUS. *Un. testâ obliquè pyramidatâ, lævigatâ, solidâ, fusco-nigrescenti, intus salmoneâ, anticè crassâ, posticè tenui et iridescenti, margine cardinali lato, crasso, dentibus magnis; latere postico obliquè producto, rotundatim angulato, ante angulum depresso, termino basali acuminato, margine ventrali versus terminum subcontracto, medio tumido, umbonibus perelevatis acuminatis, terminalibus; latere antico brevissimo, margine dorsali ante umbones cuneato.*

THE PYRAMIDAL UNIO. Shell obliquely pyramidal, smooth, solid, blackish-brown, salmon-tinted within, thick in front, thin and iridescent behind, cardinal margin wide, thick, teeth large; posterior side obliquely produced, roundly angular, depressed in front of the angle, basal termination acuminated, ventral margin subcontracted near the end, middle tumid, umboes much elevated, acuminated, terminal; anterior side very short, dorsal margin cuneate in front of the umboes.

LEA, Obs. on Unio, vol. i. p. 119. pl. 16. f. 39.

Hab. River Ohio.

More elevated and oblique than *Unio plenus*.

Species 324. (Mus. Taylor.)

UNIO RUSTICUS. *Un. testâ ovatâ, subcylindraceâ, partim viridi, supernè et ad latera divaricatim graniferâ, intus vividè cupreâ, dentibus crassis, laceratis; latere postico oblongo, obscurè biangulato, margine dorsali recto, laterali obliquo, terminali inter angulos trun-*

cato, margine ventrali rectiusculo; latere antico brevi, declivi.

THE RUSTIC UNIO. Shell ovate, subcylindrical, green in parts, above and at the sides divergently granulated, bright copper-coloured within, with thick, jagged teeth; posterior side oblong, obscurely biangular, dorsal margin straight, lateral oblique, terminal between the angles truncated, ventral margin rather straight; anterior side short, sloped.

LEA, Obs. on Unio, vol. vi. p. 14. pl. 25. f. 7.
Unio tumidulus.

Hab. Siam, Lea.

The Mexican species, *Unio pliciferus*, which Morelet has named *U. crocodilorum*, is much more ovate and acuminate than this. *Unio tumidulus* of Lea I take to be the young of our species, as shown in a specimen in the collection of T. L. Taylor, Esq.

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Species 325. (Mus. Sowerby.)

UNIO MARGARITIFERUS. *Un. testâ oblongo-ovatâ, compressâ, subarcuatâ, fusco-nigrescenti, intus albidâ, dentibus anticis haud prominentibus, dentibus posticis nullis; latere postico arcuato, obliquè prope marginem dorsalem depresso, margine dorsali convexo, laterali declivi, termino acuminato, margine ventrali ad terminum sursum accliri, medio depresso subcontracto, umbonibus cupreis, haud prominentibus; latere antico subproducto, subquadrato.*

THE PEARL-BEARING UNIO. Shell oblong-ovate, compressed, rather arched, blackish-brown, whitish within, anterior teeth not prominent, posterior teeth none; posterior side arched, obliquely depressed near the dorsal margin, dorsal margin convex, lateral margin sloped, end acuminated, ventral margin sloped upwards at the end, middle depressed, subcontracted, umboes copper-coloured, not prominent; anterior side somewhat produced, subquadrate.

DRAPANAND, Moll. Ter. Fluv. p. 132. t. 10. f. 17–19.

I believe this shell to be quite distinct from *Unio sinuatus* of Lamarck, which has prominent umboes and thick lateral teeth.

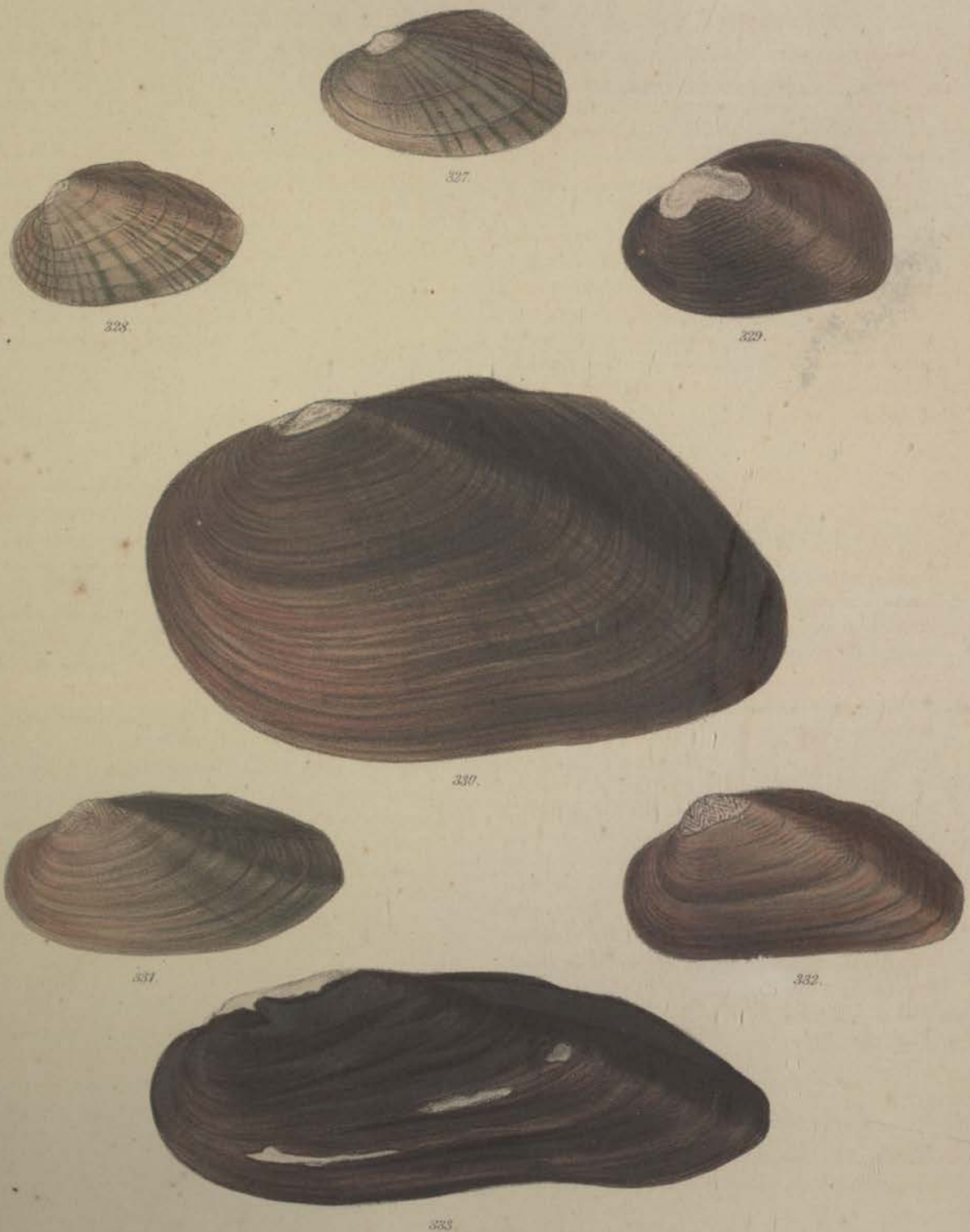
Species 326. (Mus. Sowerby.)

UNIO VENUSTUS. *Un. testâ ovatâ, solidâ, compressâ, lævigatâ, flavidâ, fasciis latis viridibus radiatâ, intus albâ; latere postico angulato, margine dorsali recto, margine laterali obliquo, termino basali acuminato, margine ventrali convexiusculo, umbonibus acuminatis; latere postico subrotundo.*

THE BEAUTIFUL UNIO. Shell ovate, solid, compressed, smooth, yellow, rayed with broad green bands, white within; posterior side angular, dorsal margin straight, lateral margin oblique, basal terminus acuminated, ventral margin rather convex, umboes acuminated; posterior side rather rounded.

LEA, Obs. on Unio, p. 4. pl. 11. f. 4.

Hab. Potosi, Missouri; Cincinnati, river Ohio.



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Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE LXV.

Species 327. (Mus. Sowerby.)

UNIO SUBANGULATUS. *Un. ovato-subcuneiformi, tenui, lævigatâ, stramineâ, posticè fasciis et lineis viridibus radiatâ, intùs pallidè salmoneâ; latere postico obtusè angulato, margine dorsali elevato, subalato, umbonibus acutis, lævibus; latere antico brevi, angustato, rotundo, dentibus anticis parvis, posticis tenuibus, laminatis.*

THE SUBANGULAR UNIO. Shell ovate-subcuneiform, thin, smooth, straw-coloured, rayed posteriorly with green bands and lines, pale salmon within; posterior side obtusely angular, dorsal margin elevated, subalate, umboes acute, smooth; anterior side short, narrow, round, anterior teeth small, posterior thin, laminar.

LEA, Obs. on Unio, vol. iii. p. 47. pl. 13. f. 23.

Hab. Chattahoochee river, Columbus, Georgia.

Species 328. (Mus. Hanley.)

UNIO SPATULATUS. *Un. testâ oblongo-subovatâ, compressâ, lævigatâ, flavido-rufescenti, fasciis et lineis viridibus medio radiatâ, intùs albidâ; latere postico producto, prope marginem dorsalem obliquè depresso, margine dorsali arcuato, prope terminum excavato, termino acuminatim rotundo, margine ventrali ad terminum surs̃um acclivi, medio rectiusculo, umbonibus tuberculis undatis armatis; latere antico rotundo, margine dorsali declivi.*

THE SPATULATE UNIO. Shell oblong-subovate, compressed, smooth, reddish-yellow, rayed in the middle with green bands and lines, white within; posterior side produced, obliquely depressed near the dorsal margin, dorsal margin arched, excavated near the end, end acuminately rounded, ventral margin sloped upwards at the end, middle rather straight, umboes armed with waved tubercles; anterior side round, dorsal margin sloped.

LEA, Obs. on Unio, vol. iv. p. 54. t. f. 22.

Hab. Rock river, Wisconsin.

Species 329. (Mus. Sowerby.)

UNIO NEGLECTUS. *Un. testâ tenui subinflatâ, ovato-subcuneiformi, luteolâ, anticè concentricè rugatâ, posticè lævigatâ, intùs subaurantiâ et cæruleâ, dentibus parvis, lateralibus tenuibus; latere postico lato, obtusè angulato, tumido, subquadrato; latere antico angusto, subdepresso, margine dorsali declivi, termino subacuminato.*

THE NEGLECTED UNIO. Shell thin, subinflated, ovate-subcuneiform, dull yellowish, concentrically wrinkled in front, smooth behind, slightly orange and bluish within, teeth small, the lateral ones thin; posterior side wide, obtusely angular, tumid, subquadrate; anterior side narrow, subdepressed, dorsal margin sloped, end subacuminated.

LEA, Obs. on Unio, vol. iv. p. 38. pl. 42. f. 10.

Hab. North Alabama.

Species 330. (Mus. Taylor.)

UNIO TORTUOSUS. *Un. testâ compressâ, latâ, solidâ, trapezoideâ, striis et rugis sublævigatis depressâ, intùs purpureâ, epidermide fusco-subviridi, obscurè radiatâ, valvulis ad marginem ventralem tortuis; latere postico obliquè angulato, angulo tumido, obtuso, areâ postangulari costis duabus subevanidis radiatâ, margine dorsali rectiusculo, laterali obliquo, termino basali subacuminato, umbonibus parvis, margine ventrali medio subcontracto; latere antico supernè obliquè cuneato.*

THE TORTUOUS UNIO. Shell compressed, broad, solid, trapezoidal, impressed with rather smooth striæ and wrinkles, inside purple, epidermis greenish-brown, obscurely rayed, valves tortuous at the ventral margin; posterior side obliquely angular, angle tumid, obtuse, postangular area rayed with two almost obsolete ribs, dorsal margin rather straight, lateral margin oblique, basal termination subacuminated, umboes small, ventral margin slightly contracted in the middle; anterior side obliquely cuneate above.

SOWERBY.

Hab. Maryland.

The fine shell here described differs from *U. purpureus* (*U. complanatus*, Say) in its greater breadth and its trapezoidal form. The unsymmetrical curve in the ventral margin may possibly be accidental.

Species 331. (Mus. Taylor.)

UNIO TRIROSTRIS. *Un. testâ oblongo-subovatâ, subsolidâ, tumidâ, angustâ, lævigatâ, intùs albâ; latere postico producto, obscurè biangulato, margine dorsali recto, laterali perobliquo, termino inter angulos truncato, margine ventrali ad terminum sursùm acclivi, post medium inflatâ, medio vix contracto, umbonibus subprominentibus, costellis graniferis, angulariter divergentibus rugatâ; latere antico subrotundo.*

THE TRIROSTRAL UNIO. Shell oblong-subovate, rather solid, tumid, narrow, smooth, white within; posterior side produced, obscurely biangular, dorsal margin straight, lateral very oblique, end between the angles truncated, ventral margin sloped upwards at the end, inflated behind the centre, very slightly contracted in the middle, umboes rather prominent, wrinkled with granulose angularly diverging ribs; anterior side rather round.

BENSON.

Hab. India.

Very much longer than *U. cærulea*, and a more solid shell.

Species 332. (Mus. Taylor.)

UNIO RECTILINEARIS. *Un. testâ oblongâ, angustâ, tumidâ, solidâ, lævigatâ, fusco-viridescenti, intùs salmoneâ et cæruleâ, umbonibus rugosis, costellis tuberculiferis angulatis ornatis; latere postico biangulato, margine dorsali convexo, laterali declivi, termino inter angulos truncato, areâ postangulari obliquè rugatâ, margine ventrali recto; latere antico producto, margine dorsali ante umbones excavato.*

THE RECTILINEAR UNIO. Shell oblong, narrow, tumid, solid, smooth, brownish-green, salmon-tinted and bluish within, umboes rugose, ornamented with angular tuberculiferous riblets; posterior side biangular, dorsal margin convex, lateral sloped, end truncated between the angles, postangular area obliquely wrinkled, ventral margin straight; anterior side produced, dorsal margin excavated in front of the umboes.

SOWERBY.

Hab. River Columbia.

Species 333. (Mus. Taylor.)

UNIO DIGITIFORMIS. *Un. testâ angustâ, elongatâ, tumidissimâ, crassissimâ, epidermide nigrâ lævigatâ indutâ, intùs albâ, dentibus anticis magnis, laceratis, posticis laminatis elongatis; latere postico obliquo, angulato, ad terminum anguli acuminato; margine ventrali posticè subinflato, contracto, medio recto; latere antico brevissimo, umbonibus magnis.*

THE FINGER-SHAPED UNIO. Shell narrow, elongated, very tumid, very thick, covered with a black, smooth epidermis, white within, anterior teeth large, jagged, posterior teeth laminar, elongated; posterior side oblique, angular, acuminated at the end of the angle, ventral margin slightly swelled posteriorly, then contracted, straight in the middle; anterior side very short, umboes large.

SOWERBY.

Hab. India.

Slightly resembling *U. Sheppardianus* in general form, but very much shorter, and more tumid and thick.

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UNIO.

PLATE LXVI.

Species 334. (Mus. Sowerby.)

UNIO EBENUS. *Un. testâ obliquè subquadratâ, crassâ, tumidâ, fusco-nigricante, concentricè rugatâ, rugis subnodosis, intùs albâ aut salmoneâ, dentibus crassis; latere postico ætate obliquè producto, marginibus dorsali et laterali arcuatis, umbonibus anticè terminalibus, prominentibus, acuminatis; latere antico brevissimo, margine laterali perpendiculari, margine dorsali brevissimo, ante umbones excavato.*

THE EBONY UNIO. Shell obliquely subquadrate, thick, tumid, blackish-brown, concentrically wrinkled, wrinkles subnodose, inside white or salmon-tinted, with thick teeth; posterior side obliquely produced when full-grown, dorsal and lateral margins arched, umboes terminal in front, prominent, acuminated; anterior side very short, lateral margin perpendicular, dorsal margin very short, excavated in front of the umboes.

LEA, Obs. on Unio, vol. i. p. 94. pl. 9. f. 14.

Hab. River Ohio.

The small specimen figured by Lea is of a comparatively rounded-square form; but the larger the growth of the specimen, the more the posterior part is obliquely produced and flattened.

Species 335. (Mus. Taylor.)

UNIO PULLATUS. *Un. testâ oblongo-cylindraceâ, crassâ, tumidâ, lævigatâ, nigrâ, intùs subpurpureâ; latere postico obliquè angulato, angulo elevato, margine dorsali rectiusculo, cuneato, laterali perobliquo, termino subrotundo, medio complanato, margine ventrali recto; latere antico brevi, umbonibus haud prominulis.*

THE SABLE-SUITED UNIO. Shell oblong-cylindrical, thick, tumid, smooth, black, purplish within; posterior side obliquely angular, angle elevated, dorsal margin rather straight, cuneate, lateral margin very oblique, end rather rounded, middle flattened, ventral margin straight; anterior side short, umboes not prominent.

LEA, Obs. on Unio, vol. vi.

Hab. River Georgia.

Species 336. (Mus. Taylor.)

UNIO CUPRINUS. *Un. testâ oblongâ, subarcuatâ, solidâ, fusco-olivaceâ, concentricè fasciatâ, intùs subcupreâ: latere postico inflato, vix angulato, prope marginem dorsalem radiatim depresso, margine dorsali arcuato, termino latè rotundo, medio depresso, margine ventrali contracto, umbonibus prominulis, lævigatis; latere antico brevi, subquadrato.*

THE COPPERY UNIO. Shell oblong, slightly arched, solid, brown-olive, concentrically banded, copper-coloured within; posterior side inflated, scarcely angular, radiately depressed near the dorsal margin, dorsal margin arched, end widely rounded, middle depressed, ventral margin contracted, umboes rather prominent, smooth; anterior side short, subquadrate.

LEA, Obs. on Unio, vol. i. p. 104. pl. 12. f. 24.

Hab. Mexico.

Species 337. (Mus. Sowerby.)

UNIO LATISSIMUS. *Un. testâ subcompressâ, utrinque hianti, rotundo-subtrigonâ, lævigatâ, fusco-olivaceâ, intùs albâ, partim pallidissimè roseâ, margine cardinali medio excavato; latere postico latissimo, elevatim angulato, ligamento maximo, margine dorsali recto, cuneato, lateruli declivi, margine ventrali latè sursum acclivi; latere antico angustiori, margine dorsali depresso, declivi, termino subacuminato, umbonibus prominentibus, angulatis.*

THE VERY WIDE UNIO. Shell subcompressed, gaping on both sides, rounded-subtrigonal, smooth, brown-olive, white within, partly very pale rose, cardinal margin excavated in the middle; posterior side very wide, with an elevated angle, ligament very large, dorsal margin straight, cuneate, lateral margin sloped, ventral margin with a wide slope upwards; anterior side narrower, dorsal margin depressed, sloped, subacuminate at the end, umboes prominent, angular.

SOWERBY.

Hab. United States of America.

The outline of this species resembles *Unio dolabræformis* and others, but the shell is much more flat.

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Sowerby del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE LXVII.

Species 338. (Mus. Sowerby.)

UNIO TAITANUS. *Un. testâ obliquè subrotundâ, elevatâ, crassâ, tumidâ, lævigatâ, olivaceâ, intùs albâ; latere postico obliquo, supernè angulato, margine dorsali depresso, declivi, termino subacuminato, medio inflato, margine ventrali convexo, umbonibus terminalibus, elevatis, acutis; latere antico brevissimo, margine dorsali ante umbones excavato.*

TAIT'S UNIO. Shell obliquely subrotund, elevated, thick, tumid, smooth, olivaceous, white within; posterior side oblique, angular above, dorsal margin depressed, sloped, end subacuminate, middle inflated, ventral margin convex, umboes terminal, elevated, acute; anterior side very short, dorsal margin excavated in front of the umboes.

LEA, Obs. on Unio, vol. i. p. 151. pl. 4. f. 11.

Hab. Alabama; Judge Tait.

Species 339. (Mus. Taylor.)

UNIO WYNEGUNGENSIS. *Un. testâ tenui, ovatâ, subtumidâ, concentricè tenuissimè striatâ, olivaceâ, ad umbones et circa divaricatim rugosâ, intùs salmoneâ, iridescenti; latere postico oblongo, obtusè angulato, termino obliquè truncato, infrà subacuminato, margine ventrali æqualiter convexâ; latere antico breviusculo, margine dorsali depresso, ante umbones excavato, termino rotundo.*

THE WYNEGUNGA UNIO. Shell thin, ovate, rather tumid, concentrically very finely striated, olive, on and about the umboes divergently wrinkled, inside salmon-tinted, iridescent; posterior side oblong, obtusely angular, end obliquely truncated, subacuminate below, ventral margin equally convex; anterior side rather short, dorsal margin depressed, excavated in front of the umboes, end rounded.

LEA, Obs. on Unio, vol. vii. p. 89. pl. 45. f. 151.

Hab. Wynegunga river, Nagpoor, Bengal.

Species 340. (Mus. Sowerby.)

UNIO TRIANGULARIS. *Un. testâ donaciformi, crassâ, tumidâ, lævigatâ, flavidâ, fasciis viridibus, interruptis, angulatim variegatis radiatâ, intùs albâ, dentibus anticis duobus et uno, laceratis, crassiusculis, posticis uno et duobus laminatis breviusculis; latere postico elevatim angulato, areâ postangulari lateraliter complanatâ; latere antico angustato, subacuminato, umbonibus prominentibus.*

THE TRIANGULAR UNIO. Shell donaciform, thick, tumid, smooth, yellowish, rayed with interrupted, angularly variegated green bands, white within, anterior teeth two and one, jagged, rather thick, posterior, one and two, laminated, and rather short; posterior side with an elevated angle, postangular area laterally flattened; anterior side narrow, subacuminated, umboes prominent.

BARNES.

Unio formosus (var.), Lea.

Hab. United States.

The *Unio formosus* of Mr. Lea appears to have the posterior area a little more spread than in this species.

Species 341. (Mus. Taylor.)

UNIO ROANOAKENSIS. *Un. testâ latè compressâ, subtrapezoideâ, subrugosâ, anticè fuscâ, posticè nigrescenti, intùs purpureâ; latere postico lato, obtusè angulato, post angulum canalibus duobus distanter radiatim impresso, margine dorsali elevato, subconvexo, laterali obliquè truncato, medio complanato, margine ventrali contracto; latere antico rotundatim subquadrato, ante umbones excavato, depresso, umbonibus purpureis, lævibus.*

ROANOAK'S UNIO. Shell wide, compressed, subtrapezoidal, subrugose, brown in front, blackish behind, purple within; posterior side wide, obtusely angular, behind the angle impressed with two distant radiating canals, dorsal margin elevated, subconvex, lateral margin obliquely truncated, middle flattened, ventral margin contracted; anterior side roundly subquadrate, excavated and depressed in front of the umboes; umboes purple, smooth.

LEA, Obs. on Unio, vol. ii. p. 27. pl. 7. f. 21.

Hab. Virginia.

Species 342. (Mus. Taylor.)

UNIO EMARGINATUS. *Un. testâ oblongâ, subcylindraceâ, tumidâ, olivaceâ, viridi concentricè fasciatâ, intùs albâ; latere postico obtusè angulato, margine dorsali rectiusculo, laterali obliquo, termino basali obtuso, margine ventrali rectiusculo, medio subcontracto, umbonibus prominulis, lævibus; latere antico subtruncato.*

THE EMARGINATE UNIO. Shell oblong, subcylindrical, tumid, olive, concentrically banded with green, white within; posterior side obtusely angular, dorsal margin rather straight, lateral oblique, basal end obtuse, ventral margin rather straight, middle slightly contracted, umboes rather prominent, smooth; anterior side subtruncated.

LEA, Obs. on Unio, vol. i. p. 174. pl. ix. f. 22.

Hab. —— ?

Figure 343. (Mus. Taylor.)

UNIO JAYENSIS. We figure this elongated specimen as more nearly approaching the variety named *æquillus* by Mr. Lea.

Species 345. (Mus. Sowerby.)

UNIO SAGRINATUS. *Un. testâ subrotundâ, lenticulari, solidâ, flavido-fuscâ, concentricè rugatâ, minutè granulatâ, intùs albâ, dentibus anticis quadrifariam divisis, umbonibus elevatis, rotundis; latere postico ad terminum subacuminato, margine dorsali declivi, lateraliter compressâ; latere antico brevissimo, margine superiori valde declivi, termino acuminato, margine ventrali rotundo.*

THE SHAGREENED UNIO. Shell subrotund, lenticular, solid, yellowish-brown, concentrically wrinkled, minutely granulated, inside white, with anterior teeth divided into four, umboes elevated, round; posterior side rather acuminated at the end, dorsal margin sloped, laterally compressed; anterior side very short, upper margin strongly sloped, end acuminated, ventral margin rounded.

SOWERBY.

Hab. —— ?

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Sowerby, del. et lith.

Vincent Brooks, Imp.

UNIO.

PLATE LXVIII.

Species 346. (Mus. Taylor.)

UNIO PURPUREUS. *Un. testâ rhomboideâ, subrugosâ, solidâ, fusco-olivaceâ, intùs purpureâ, salmoneâ aut albâ, dentibus crassis, laceratis; latere postico oblongo, obtusè biangulato, post angulum posteriorem canali radiatim impressâ, margine dorsali convexo, laterali rotundatim declivi, termino inter angulos truncato, medio depresso, margine dorsali vix sinuato, umbonibus lævibus haud prominentibus; latere antico angustiori, subrotundo.*

THE PURPLE UNIO. Shell rhomboidal, subrugose, solid, olive-brown, inside purple or salmon-tinted or white, teeth thick, jagged; posterior side oblong, obtusely biangular, radiately impressed with a canal behind the posterior angle, dorsal margin convex, lateral roundly sloped, end truncated between the angles, middle depressed, dorsal margin very slightly sinuous, umboes smooth, not prominent; anterior side narrower, rounded.

SAY.

Unio complanatus, Lea; *U. faliginosus? sordidus?* Lea.

Unio purpurascens, rhombula, carinifera, Georgina, glabrata, sulcidens, Lamarck. *Vide* Hanley.

Hab. Massachusetts.

Species 347. (Mus. Hanley.)

UNIO JEJUNUS. *Un. testâ oblongo-ovatâ, nitenti, nigrescenti, tenui, intus cæruleâ, dentibus laminatis, laceratis; latere postico producto, subobliquo, vix angulato, areâ posticâ sulcâ radianti impressâ, margine dorsali arcuato, declivi, termino rotundo, margine ventrali rectiusculo, umbonibus lævibus, haud prominentibus; latere antico angusto, brevi, subrotundo.*

THE JEJUNE UNIO. Shell oblong-ovate, shining, blackish, thin, blue within, teeth laminated, jagged; posterior side produced, suboblique, hardly angular, posterior area impressed with a radiating groove, dorsal margin arched, sloped, end rounded, ventral margin rather straight, umboes smooth, not prominent; anterior side narrow, short, rather rounded.

LEA, Obs. on Unio, vol. ii. p. 9. pl. 4. f. 9.

Unio auratus, Lea?

Hab. Roanoake.

Species 348. (Mus. Taylor.)

UNIO LAZARUS. *Un. testâ angustâ, compressâ, subarcuatâ, subrugosâ, fuscâ, intùs purpureâ, dentibus crassiusculis; latere postico producto, obscurissimè biangulato, margine dorsali arcuato, declivi, inter angulos truncato, margine ventrali ante terminum et medio paulò contracto, umbonibus lævigatis; latere antico angusto, supernè declivi.*

THE LAZARUS UNIO. Shell narrow, compressed, slightly arched, rather rough, brown, purple within, teeth somewhat thick; posterior side produced, very obscurely biangular, dorsal margin arched, sloped, truncated between the angles, ventral margin before the end and in the middle a little contracted, umboes smooth; anterior side narrow, sloped above.

LEA, Obs. on Unio, vol. v. p. 15. pl. 14. f. 9.

Hab. Abbeville district.

Species 349. (Mus. Taylor.)

UNIO HOPETOWNENSIS. *Un. testâ subcuneiformi, subcompressâ, nigrâ, lævigatâ, intùs albo-purpurascenti; latere postico lato, biangulato, ad angulum anteriorem tumido, margine dorsali elevato, laterali convexo-declivi, inter angulos truncato, medio complanato, margine ventrali recto; latere antico angusto, brevi, ad terminum subrotundo.*

THE HOPETOWN UNIO. Shell subcuneiform, subcompressed, black, smooth, purplish-white within; posterior side wide, biangular, tumid at the anterior angle, dorsal margin elevated, lateral convexly sloped, truncated between the angles, middle flat, with ventral margin straight; anterior side narrow, short, rounded at the end.

LEA, Obs. on Unio, vol. ii. p. 29. pl. 9. f. 24.

Hab. Hopetown, Georgia.

This species is much more expanded at the posterior side and has a more elevated angle than *U. purpureus*.

Species 350. (Mus. Taylor.)

UNIO DOWNEI. *Un. testâ crassâ, tumidâ, angustâ, subrhomboideâ, castaneâ, lævigatâ, intùs salmoneâ, dentibus magnis, laceratis; latere postico biangulato, inter*

angulos truncato, areâ angulari elevatâ, medio obliquè depresso, margine ventrali contracto; latere antico brevi, angusto, declivi, umbonibus lævigatis, tumidis.

DOWNE'S UNIO. Shell thick, tumid, narrow, subrhomboidal, chestnut-coloured, smooth, salmon-tinted within, teeth large, jagged; posterior side biangular, truncated between the angles, angular area elevated, middle obliquely depressed, ventral margin contracted; anterior side short, narrow, sloped, umboes smooth, tumid.

LEA, Obs. on Unio, vol. ii. p. 29. pl. 9. f. 24.

Hab. Hopetown, Georgia.

A remarkably thick, solid, subcylindrical shell.

Species 351. (Mus. Sowerby.)

UNIO REGULARIS. *Un. testâ tenui, inflatâ, ovatâ, obscurè fuscâ, concentricè subrugosâ, intùs cupreo-subviridi latere postico lato, margine dorsali convexo, elevato, termino subacuminato, margine ventrali rotundo, medio subcontracto, umbonibus lævibus, anticè declivis; latere antico angustato, termino rotundo.*

THE REGULAR UNIO. Shell thin, inflated, ovate, dull brown, concentrically subrugose, greenish copper-coloured within; posterior side wide, dorsal margin convex, elevated, end subacuminated, ventral margin round, middle slightly contracted, umboes smooth, sloped in front; anterior side narrow, end rounded.

LEA, Obs. on Unio, vol. iii. p. 81. pl. 25. f. 59.

Hab. French Broad River, East Tennessee.

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Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

UNIO.

PLATE LXIX.

Species 352. (Mus. Hanley.)

UNIO VERRAUIANUS. *Un. testâ elongatâ, subcylindraceâ, haud peculiariter inæquilaterali, fusco-olivaceâ concolore, rugis confertis concentricis (magis minusve autem irregularibus) anticè et supernè ornatâ, margine dorsali posticè subrecto, vixque declivi, margine ventrali retuso, lunulâ satis magnâ, margaritâ albidâ, dentibus cardinalibus transversis, laciniatis.*

VERRAU'S UNIO. Shell elongated, subcylindrical, not particularly inequilateral, of an uniform olivaceous brown, with more or less irregular, close, concentric wrinkles on the umbonal region and in front; hinder dorsal edge straightish, scarcely sloping; ventral margin retuse, lunule rather large, nacre whitish, cardinal teeth transverse, jagged.

LEA, Obs. on Unio, vol. vi. p. 21. pl. 27. f. 16.

Hab. Cape of Good Hope, S. Africa.

Very closely allied to *Caffer*, but with coarser sculpture. It is moderately large and strong, has the teeth rather big than otherwise, and its pearl is generally stained with olivaceous yellow on the hinder portion of the umbonal cavity.

Species 353. (Mus. Taylor.)

UNIO OSBECKII. *Un. testâ oblongâ, in medio subventricosâ, posticè compressâ, fusco-olivaceâ concolore, nates versus acutas porcis rudibus, anticè transversis, posticè angularibus, corrugatâ; extremitate posticâ attenuatâ, angulatâ, margine ventrali retuso, lunulâ perangustâ, inconspicuâ, margaritâ albido-cærulescente, dentibus cardinalibus transversis, dentibus lateralibus valde elongatis.*

OSBECK'S UNIO. Shell oblong, subventricose in the middle, compressed behind, of an uniform brownish olive-colour, umbonal region adorned with coarse raised wrinkles, the front ones transverse, the hinder angular; posterior extremity tapering, angular, ventral margin retuse, lunule very narrow, obscure, nacre bluish-white, cardinal teeth transverse, lateral teeth much elongated.

PHILIPPI, Ab. N. Conch. iii.; Unio, pl. 3. f. 1.

Unio Douglasiæ? Gray.

Hab. China.

Besides the principal sculpture, some acutangular raised lines are likewise visible upon the umbonal slope in the vicinity of the ligament. The valves are not very thick, the beaks are acute, rather prominent, and much noduled. The umbonal ridge is rather angular at its commencement, but eventually is obtuse. The nacre is iridescent posteriorly, and the cavity beneath the umboes much excavated.

Species 82. (Fig. *a*, Mus. Hanley.)

UNIO PERDIX. *Un. testâ magnâ, ovali, crassâ, nitidâ, subventricosâ, olivaceâ, maculis pullis remotis posticè sparsim radiatâ, sublævigatâ, rugis incrementi anticè subplicatâ; latere antico haud brevi, subangusto, ad extremitatem rotundato; extremitate posticâ obtusè subbiangulatâ, margine ventrali subarcuato, umbonibus latis, lunulâ angustâ; margaritâ albâ, dentibus cardinalibus magnis, eminentibus.*

THE PARTRIDGE UNIO. Shell large, oval, thick, glossy, subventricose, olivaceous, with a few distant dusky, radiating spots on the posterior half, nearly smooth, but with pliciform wrinkles of growth in front; anterior side not short, somewhat narrow, rounded at its extremity; posterior end bluntly subbiangulated, ventral margin subarcuated, umboes broad, lunule narrow, nacre white, cardinal teeth large, prominent.

LEA, Trans. Amer. Ph. Soc. vol. v. p. 5. pl. 11. f. 31.

Unio pectorosus, Conrad.

Hab. Elk river, near its junction with the Tennessee.

This is not the species erroneously so named in Plate XVIII.

Species 354. (Mus. Hanley.)

UNIO CLAVA. *Un. testâ ponderosâ, subrhomboideo-cuneiformi, anticè truncatâ satisque tumidâ, posticè attenuatâ, compressâ, fuscâ concolore, lævi, natibus valde eminentibus, lunulâ permagnâ, margaritâ albido-cærulescente, dentibus cardinalibus magnis, pyramidalibus.*

THE CLUB UNIO. Shell very heavy, of a somewhat rhomboidal wedge-shape, truncated and somewhat inflated in front, gradually compressed and tapering behind, of an uniform dirty brown, smooth, beaks very prominent, lunule very large, nacre bluish-white, cardinal teeth large, pyramidal.

LAMARCK, Anim. sans vert., vol. vi. pt. 1. p. 74.

Unio Modioliformis, Say (teste Lea).
Unio scalenia, Raf. (teste Lea).
Hab. Western waters in N. America.

The umbonal ridge, which is rather wide and conspicuous, is preceded by a broad shallow concavity. There is a certain peculiarity in the extreme divergence of the beaks from each other. The hinge-margin is very deep in front.

Species 355. (Mus. Hanley.)

UNIO AMBIGUUS. *Un. testâ subovali, vix inæquilaterali, subtenui, haud ventricosâ, olivaceâ, vix (vel minimè) radiatâ, anticè concentricè et confertim subrugosâ, posticè lævi; margine dorsali utrinque angulato, posticè subacclivi; margine ventrali convexo, natibus haud eminentibus, margaritâ squalidè albidâ, dentibus cardinalibus transversis.*

THE DOUBTFUL UNIO. Shell suboval, scarcely inequilateral, rather thin, not ventricose, olivaceous, not rayed (or at most very indistinctly so), densely and concentrically wrinkled in front, smooth behind, dorsal edge angulated at each end, somewhat rising behind, ventral margin convex, beaks not prominent, nacre dirty white, cardinal teeth transverse.

PARREYS, MSS. in Philippi, Ab. N. Conch. vol. ii.
Hab. Australia.

Runs very closely into the characters of *Unio Australis*, Lam. (*Moretonicus*). It has neither a lunule nor an umbonal ridge. The pearl is often stained with olive-colour in the umbonal cavity, and the cardinal teeth are so transverse as to appear lateral.

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360.a.

Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

UNIO..

PLATE LXX.

Species 306. (Fig. *a*, Mus. Hanley.)

UNIO MULTIRADIATUS. *Un. testâ magnâ, subovatâ, squalidè luteâ, radiis viridibus angustis undique confertim pictâ, sublævigatâ; latere antico haud peculiariter brevi, angusto, rotundato; extremitate posticâ subbiangulatâ; margine ventrali arcuato, utrinque (et anticè præsertim) acclivi; umbonibus latis, eminentibus, lunulâ angustâ, margaritâ albidâ, dentibus cardinalibus haud laciniatis, dentibus lateralibus arcuatis.*

THE MANY-RAYED UNIO. Shell large, subovate, dirty yellow, everywhere painted with close and rather narrow green rays, not sculptured; anterior side not particularly short, narrow, rounded; posterior extremity subbiangulated, ventral edge curved, rising at both extremities, especially in front, umboes broad, projecting, lunule narrow, nacre white, cardinal teeth not laciniated, lateral teeth curved.

LEA, Obs. on Unio, vol. i. p. 48. pl. 9. f. 15.
Unio fasciolus, Conrad (as of Raf.).
Unio ligamentina, Deshayes.
Hab. Ohio.

This is not the species erroneously so designated in Plate LXI. It is a strong glossy shell, with its hinder dorsal edge straightish and scarcely sloping, no distinct umbonal ridge, and decidedly prominent cardinal teeth.

Species 356. (Mus. Hanley.)

UNIO CAMPTODON. *Un. testâ lævi, oblongo-subrhomboideâ, vix inæquilaterali, flavo-olivaceâ, zonis lividobrunneis sparsim ornatâ, haud radiatâ, vix subventricosâ; margine dorsali anticè recto, demisso, posticè vix minimè declivi; margine ventrali retuso, natibus acutis, inclinatis, porcis obliquis concentricè ornatis, lunulâ angustâ, profundâ, margaritâ albido-cærulescente.*

THE BENT-TOOTH UNIO. Shell smooth, subrhombic-oblong, scarcely inequilateral, olivaceous-yellow, with two or three livid brown zones of growth, not rayed, at most subventricose; front dorsal edge straight, lower than the almost horizontal posterior one, ventral margin retuse, beaks inclined, acute, adorned with raised, obliquely concentric wrinkles, lunule narrow, deep, nacre bluish-white.

SAY, Amer. Conch. pl. 42.
Unio declivis, Conrad, Mon. U. pl. 23 (teste Lea).
Unio Sayii, Tappan (teste Lea).
Hab. New Orleans, N. America.

The umbonal ridge, which is succeeded by two approximate sulci, with a raised strip between them, is far from conspicuous. The hinder extremity is bluntly subbiangulated, the umboes are prominent, the ligament small and narrow.

Species 357. (Mus. Hanley.)

UNIO CLAIRBORNENSIS. *Un. testâ validâ, subventricosâ, magis minusve ovatâ, anticè haud peculiariter brevi, flavo-subolivaceâ concolore, plicis incrementi obsoletis utrinque corrugatâ, in medio lævigatâ; margine ventrali in medio retuso, aliter convexo, lunulâ inconspicuâ, margaritâ albido-cærulescente, dentibus cardinalibus magnis, pyramidalibus, dentibus posticis (vel lateralibus) elongatis, sagrinatis.*

THE CLAIRBORNE UNIO. Shell strong, subventricose, ranging in form from subovate to obovate, not particularly short in front, of an uniform tint of somewhat olivaceous-yellow, with obsoletely pliciform wrinkles of increase at both extremities, otherwise smooth; ventral margin indented in the middle, convex at each end, no distinct lunule, nacre bluish-white, cardinal teeth large, pyramidal, lateral long and shagreened.

LEA, Obs. on Unio, vol. ii. p. 105. pl. 24. f. 115.
Hab. Alabama river, near Clairborne, N. America.

The front extremity is rounded, the hinder dorsal edge somewhat raised. The cavity of the beaks is deeply excavated, and the umbonal ridge by no means conspicuous.

Species 358. (Mus. Hanley.)

UNIO PLATYRRHINCHOIDEUS. *Un. testâ elongatâ, haud parvâ, subtenui, subcylindraceâ, nitidè fusco-castaneâ concolore, lævigatâ; anticè brevi, posticè productâ et attenuatâ, infernè retusâ, natibus satis eminentibus, lanulâ inconspicuâ, margaritâ albidâ, dentibus cardinalibus transversis, haud magnis.*

THE PLATYRRHINCUS-LIKE UNIO. Shell elongated, rather large, not very strong, glossy, subcylindraceous, of an uniform rich brown, smooth; anterior side short, posterior side produced and attenuated; ven-

tral margin somewhat incurved, beaks rather prominent, lunule obscure, nacre whitish, cardinal teeth transverse, not large.

DUPUY, Moll. T. et Fl. France, p. 649. pl. 27. f. 16.

Hab. Arcachon, Western France.

The front extremity is angular above, and rounded below; the hinder side gradually tapers to a rounded peak. The umbonal ridge is not prominent; the pearly white of the interior is, for the most part, stained here and there with livid olive.

Species 359. (Mus. Hanley.)

UNIO POWELLII. *Un. testâ oblongâ, modicè inæquilaterali, subventricosâ, nitidè fusco-flavidâ concolore, lævigatâ, anticè perangustâ, rotundatâ, posticè obtusissimâ et multum latiore; margine dorsali anticè declivi, posticè subacclivi, margine ventrali in medio subretuso; posticè arcuato, margaritâ albidâ, dentibus cardinalibus laciniatis.*

POWELL'S UNIO. Shell oblong, moderately inequilateral, subventricose, of an uniform glossy brownish-yellow, not sculptured; front extremity very narrow, rounded; hinder extremity much broader, very blunt; front dorsal edge sloping, hinder one rather elevated; ventral margin somewhat indented in the middle, arched behind, nacre whitish, cardinal teeth jagged.

LEA, Obs. on Unio, vol. v. p. 26. pl. 19. f. 25.

Hab. Saline river, Arkansas, N. America.

The valves are rather large and strong, with their umboes, which are almost always eroded, not particularly prominent. The pearly interior is stained with yellowish olive in the umbonal cavity; the hinge-margin is rather narrow, and the umbonal ridge but little projecting.

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363.a.

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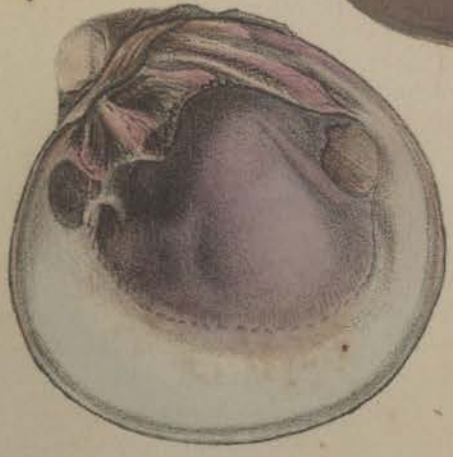

363.b.

Sowerby, del. et lith.

Vincent Brooks Day & Son, Imp.

UNIO.

PLATE LXXI.

Species 360. (Mus. Hanley.)

UNIO CORRUGATUS. *Un. testâ parvâ, viridi, subventricosâ, magis minusve ovali, vix inæquilaterali, lævigatâ, porcis autem linearibus obliquis nates versus eminentes subradiatâ; margine dorsali vix declivi, anticè concavo; margine ventrali convexo; lunulâ distinctâ, margaritâ albidâ, dentibus cardinalibus validis, laciniatis, haud laminatis.*

THE WRINKLED UNIO. Shell small, green, subventricose (but varying in shape from elliptic to rounded oval), scarcely inequilateral, smooth, except near the prominent beaks, which are adorned with somewhat radiating, oblique, linear ridges; dorsal edges not much sloping, the front one concave; ventral margin convex; lunule well marked, nacre nearly white, cardinal teeth strong, jagged, not lamellar.

CHEMNITZ (*Mya*), Conch. Cab. vol. vi. pl. 3. f. 22.

Mya spuria, Gmelin.

Hab. Coromandel, etc., East Indies.

Müller's description of his *Mya corrugata* must have been taken from very young individuals. The shells delineated by Chemnitz and Wood evidently belong to this species. It is more than probable that the *U. Wyegungensis* of Lea is a transverse form of this variable species.

Species 361. (Mus. Hanley.)

UNIO FORBESIANUS. *Un. testâ parvâ, oblongo-subquadratâ, anticè brevi, subtenui, nitidâ, sublævigatâ, posticè subventricosâ, flavido-olivaceâ, radiis angustis viridi-olivaceis (posticè magis conspicuis) ornatâ, areâ posticâ extremâ rugis elevatis obliquis sparsim sculptâ; margine ventrali valde convexo, anticè acclivi, lunulâ inconspicuâ, margaritâ albidâ, dentibus cardinalibus validis.*

FORBES'S UNIO. Shell small, squarish-oblong, decidedly short in front, not thick, glossy, subventricose behind, yellowish-olive, with narrow rays of olivaceous green, which are more conspicuous posteriorly, smooth, yet with raised oblique wrinkles behind the umbonal ridge; ventral margin curved, rising in front, lunule inconspicuous, nacre whitish, cardinal teeth strong.

LEA, Obs. on Unio, vol. v. p. 20. pl. 16. f. 17.

Hab. Savannah river, North America.

The umboes are eroded, and not prominent, the front extremity is rounded, the hinder termination bluntly biangulated, the hinder dorsal edge straightish and scarcely sloping, the nacre iridescent, and the umbonal ridge conspicuously angled.

Species 362. (Mus. Hanley.)

UNIO NATALENSIS. *Un. testâ parvâ, elongato-oblongâ, compressiusculâ, squalidè flavo-olivaceâ, haud radiatâ, rugis elevatis rudibus irregularibus (anticè confertioribus magisque acutis, posticè latioribus magisque obsoletis) undique concentricè sculptâ; margine ventrali subretuso; dentibus cardinalibus haud laminatis.*

THE NATAL UNIO. Shell small, elongated-oblong, somewhat compressed, dirty olivaceous-yellow, not rayed, concentrically sculptured throughout with coarse and irregular raised lines, which are sharper and closer in front, broader and more flattened behind; ventral margin slightly retuse; cardinal teeth not lamellar.

LEA, Proc. Philadelph. 1864.

Hab. Natal, South Africa.

The whitish nacre is stained with olivaceous yellow in the more concave portion of the interior. The valves are not thick, the anterior side is decidedly short and rounded at its extremity, the posterior end is rotundately subbiangulated, and the broad and flattened umbonal ridge is succeeded by a distinct though shallow groove, and a second, though very faint one, beyond it.

Species 363. (Fig. *a*, *b*, Mus. Hanley.)

UNIO RETUSUS. *Un. testâ altâ, subcordato-pyramidali, solidissimâ, sublævigatâ, rugis incrementi tantum subplicatâ, olivaceo-flavescente (anticè sæpius saturatiore, i.e. fusco-nigrescente), haud radiatâ, latere antico perbrevi, rotundato, compressiusculo; margine ventrali valde arcuato; natibus maximè eminentibus antrorsum inclinatis, margaritâ purpureâ, dentibus cardinalibus permagnis, laciniatis, pyramidalibus.*

THE BLUNT UNIO. Shell somewhat heart-shaped pyramidal, higher than broad, very solid, smooth, except for the pliciform ridges of increase, of an olivaceous

yellow, which usually deepens in front to blackish-brown, not rayed, somewhat compressed at the very short and rounded anterior extremity; ventral margin much arcuated; beaks remarkably prominent, curving forward, nacre purple, cardinal teeth peculiarly large, jagged, pyramidal.

LAMARCK, Anim. sans Vert. vol. vi. pt. 1. p. 72; Conrad, Mon. U. p. 19. pl. 8.

U. torsa, Rafin. Ann. Sc. Phys.

U. obtusa, (Desh.? in) Cuvier, Règne Anim., teste Lea.

Hab. Western States, North America.

The valves are moderately large, and are only rayed, if at all, by a few obscure lines upon the swollen umbonal region; the hinge-margin is very broad.

Species 364. (Mus. Hanley.)

UNIO SICULUS. *Un. testâ elongato-oblongâ, satis convexâ, nitidè luteo-olivaceâ, posticè productâ et squalidè viridi, haud radiatâ, sublævigatâ; margine ventrali retuso; natibus acutis, satis eminentibus, serie duplici porcorum (quæ angulos valde obtusos junctura formant) subtransversim ornatis; lunulâ inconspicuâ, margaritâ albido-cærulescente, dentibus cardinalibus transversis.*

THE SICILIAN UNIO. Shell elongated-oblong, moderately convex, shining olivaceous yellow, changing to dirty green near the posterior termination, not rayed, nearly smooth; ventral margin indented; beaks acute, rather prominent, adorned with two sets of coarse and somewhat transverse raised wrinkles, which meet at a very obtuse angle; lunule inconspicuous, nacre bluish-white, cardinal teeth transverse.

SWAINSON, Tr. Malacol. p. 282. f. 58.

Unio Turtoni, Payrandeau?

Hab. Sicily, etc.

Should this prove the *Turtoni* of Payrandeau, that name must take priority. It is certainly quite distinct from *pictorum*. The valves are rather strong, not large, and inclined to be reniform, narrow and rounded at their anterior extremity, and produced posteriorly; the hinder dorsal edge is slightly elevated.

Species 365. (Mus. Hanley.)

UNIO BILINEATUS. *Un. testâ oblongâ, tenui, lævi, modicè convexâ, marginem versus olivaceâ, ad umbones ferrugineâ, minimè radiatâ, porcis geminis linearibus in et supra costam umbonalem inconspicuam ornatâ; margine dorsali subrecto; margine ventrali convexo; natibus haud eminentibus, lunulâ nullâ, margaritâ albidâ, dentibus cardinalibus laminatis.*

THE TWO-LINED UNIO. Shell oblong, thin, smooth, glossy, moderately convex, ferruginous on the umbonal region, changing to olive elsewhere, not rayed, with two closely adjacent linear ridges upon and beyond the inconspicuous umbonal ridge; dorsal edges nearly straight; ventral margin convex; beaks not raised, no lunule, nacre whitish, cardinal teeth lamellar.

LEA, Obs. on Unio, vol. i. p. 108. pl. 11. p. 19.

Hab. River Hoogly, Hindostan.

In this species, which rarely attains to any considerable magnitude, the linear ridges are only apparent near the umboes, the anterior side, which is not particularly short, is angulated above and rounded below, and the posterior extremity rotundately subbiangulated. The nacre has occasionally a slight tinge of salmon-colour.

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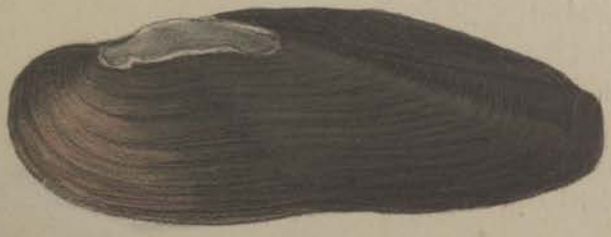

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UNIO.

PLATE LXXII.

Species 366. (Mus. Hanley.)

UNIO RAVISTELLUS. *Un. testâ parvâ, oblongo-subquadratâ, haud peculiariter inæquilaterali, compressiusculâ, satis validâ, ferrugineo-olivaceâ, sublævigatâ, minimè radiatâ; margine dorsali utrinque angulato; margine ventrali convexo, margaritâ albo-livescente, dentibus cardinalibus validis, haud laminatis.*

THE LITTLE RUSSET UNIO. Shell small, squarish-oblong, not very inequilateral, rather compressed, moderately strong, ferruginous-olive, neither rayed nor sculptured; dorsal margin angulated at each end; ventral margin convex, nacre livid white, cardinal teeth strong, not laminar.

MORELET, Testac. Novis. vol. i. p. 29.

Hab. Lake Ysabel, Guatemala.

There is no distinct umbonal ridge.

Species 367. (Mus. Hanley.)

UNIO STRIATULUS. *Un. testâ parvâ, solidâ, subventricosâ, subrhombeâ, fusco-olivaceâ, haud radiatâ, sublævigatâ; margine dorsali utrinque subdeclivi; margine ventrali convexiusculo, anticè arcuatim acclivi, extremitate posticâ latiusculâ, rotundato-subbiangulatâ, margaritâ albido-cærulescente, dentibus cardinalibus magnis, laciniatis, haud transversis, dentibus lateralibus arcuatis.*

THE STRIOLATED UNIO. Shell small, solid, subventricose, subrhombic, olivaceous-brown, not rayed, smooth or nearly so; dorsal edges slightly sloping; ventral margin rather convex, arcuatedly rising in front, hinder extremity rather broad, rotundately subbiangulated, nacre bluish-white, cardinal teeth large, jagged, not transverse, lateral teeth arched.

LEA, Obs. on Unio, vol. viii. p. 59. pl. 2. f. 202.

Hab. Roanoke river, N. Carolina, U. States, N. America.

Although the characters are chiefly negative, yet this strong dwarf species can easily be recognized. The hinge-margin is broad, and the inconspicuous umbonal ridge is chiefly defined by the unsculptured concavity which follows it.

Species 368. (Mus. Hanley.)

UNIO VELARIS. *Un. testâ parvâ, tenui, compressiusculâ, pallidè viridi, haud radiatâ, sublævigatâ, extremitate anticâ perangustâ; latere postico alato; margine ventrali arcuato, anticè subito acclivi; natibus peracutis, eminentibus; lunulâ excavatâ, margaritâ albâ, dentibus cardinalibus magnis, approximatis, laminatis.*

THE SAIL-LIKE UNIO. Shell small, thin, rather compressed, pale green, neither radiated nor sculptured; anterior extremity very narrow; posterior side winged, ventral margin arcuated, rising abruptly anteriorwards, beaks very acute, prominent, lunule excavated, nacre white, cardinal teeth large, lamellar, approximate.

BENSON, in Hanley Rec. Bivalv. p. 385. pl. 23. f. 42.

Hab. Assam.

The abrupt fall of the front dorsal margin in this symphonote species gives a seeming projection to the beaks. Both dorsal edges are angulated above, and rounded off below; the hinder dorsal edge is much elevated. The compression of the valves is especially conspicuous on the anterior portion of the shell.

Species 369. (Mus. Hanley.)

UNIO ROTUNDUS. *Un. testâ rotundatâ, anticè brevi et angustâ, posticè latissimâ et subalatâ, medio subventricosâ, sublævigatâ, supernè autem rugis incrementi tenuibus elevatis concentricè sculptâ, nigro-olivaceâ concolore; margine dorsali anticè valde declivi, posticè acclivi, utrinque angulato; margine ventrali valde arcuato, anticè obliquè acclivi, lunulâ perangustâ, profundâ, natibus haud eminentibus, margaritâ albidâ, dentibus cardinalibus laciniatis, transversis, dentibus lateralibus arcuatis.*

THE ROUNDED UNIO. Shell roundish, short and narrow in front, somewhat winged and very broad behind, subventricose in the middle, smoothish, yet closely marked above in front with fine raised wrinkles of increase, of a uniform dark olive-colour; dorsal edge much sloping downwards in front, rising behind, angulated at each end; ventral margin much arcuated, rising very obliquely in front, lunule very narrow, profound, beaks not much elevated, nacre whitish, cardinal teeth jagged, transverse, lateral teeth much curved.

SPIX, Test. Bras. pl. 26. f. 3, 4.

Hab. Brazil.

The umbonal ridge is very indistinct.

Species 370. (Mus. Hanley.)

UNIO SUBTENTUS. *Un. testâ oblongo-elongatâ, anticè angustâ, posticè productâ, satis compressâ, luteâ, radiis viridibus, interruptis, remotiusculis, latiusculis ornatâ, sublævigatâ, areâ posticâ plicis divergentibus, latis, depressis, conspicuè sculptâ; margine dorsali postico convexiusculo, haud declivi, lunulâ lanceolatâ, margaritâ pallidè aurantio-rubrâ, dentibus cardinalibus haud laminatis.*

THE CORDED UNIO. Shell elongated oblong, narrow in front, produced behind, rather depressed, dirty yellow, with rather broad and rather distant dusky green interrupted rays, smooth, except upon the umbonal slope, which is adorned throughout with broad and depressed diverging folds; hinder dorsal edge rather convex, not sloping; lunule lanceolate; nacre salmon-coloured, cardinal teeth not laminar.

SAY, Amer. Conch. pl. 15.

Hab. S. Carolina, N. America.

Moderately large, rounded in front, and not provided with a well-marked umbonal ridge.

Species 371. (Mus. Hanley.)

UNIO RENIFORMIS. *Un. testâ oblongo-subreniformi, validâ, subventricosâ, brunneâ concolore, sublævigatâ; margine dorsali postico brevi, rectiusculo, haud declivi; margine ventrali incurvato, natibus acutis, umbonibus satis eminentibus, lunulâ inconspicuâ, margaritâ albido-cærulescente, dentibus cardinalibus validis, cristatis.*

THE KIDNEY-SHAPED UNIO. Shell oblong-subreniform, strong, subventricose, of a uniform brown, neither rayed nor sculptured; hinder dorsal edge short, straightish, almost horizontal; ventral margin incurved in the middle, beaks acute, umboes rather prominent, no distinct lunule, nacre bluish-white cardinal teeth strong and crested.

SCHMIDT, MSS. in Rossm. Icon. pt. 3. p. 31. f. 213.

Hab. S. Germany.

This somewhat rare shell (not impossibly a variety, rather than a species) is rather short and rounded in front, somewhat tapering (at least in the adult) behind. The umbonal ridge, which is rather indistinct, is succeeded by a broad and shallow groove.

Species 372. (Mus. Hanley.)

UNIO ANGUSTATUS. *Un. testâ elongatâ, posticè attenuatâ et truncatâ, compressâ (præsertim infernè juxta medium), piceâ concolore, lævigatâ; margine dorsali subrecto, vix declivi, utrinque angulato; margine ventrali retuso, anticè subrepente arcuatim acclivi, areâ posticâ extremâ concavâ, margaritâ albâ, dentibus cardinalibus transversis.*

THE NARROWED UNIO. Shell elongated, tapering and truncated behind, of a uniform pitch-colour, smooth, compressed (especially below near the middle); dorsal edges nearly straight, scarcely, if at all, sloping, angulated at each end; ventral edge indented, rather suddenly arching upwards in front, area beneath the ligament concave, nacre white, cardinal teeth transverse.

LEA, Trans. Amer. Ph. Soc. N. S., vol. v. p. 4. pl. 17. f. 43.

Hab. Congaree and Cooper rivers, S. Carolina, N. America.

The umbonal ridge is conspicuous, and is succeeded by a shallow groove.

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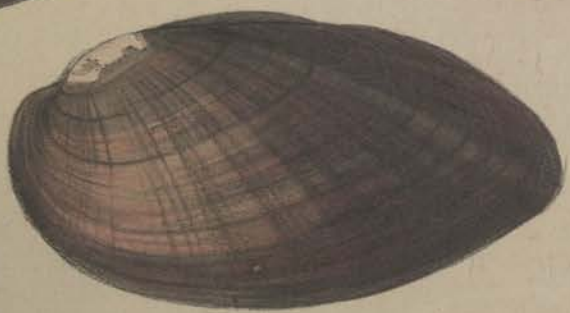

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UNIO.

PLATE LXXIII.

Species 373. (Mus. Hanley.)

UNIO NUX PERSICA. *Un. testâ perparvâ, solidâ, oblongo-subrhomboideâ, posticè obliquè biangulatâ, fusco-olivaceâ concolore, plicis rudibus undique sculptâ, plicis anticè deorsum declivibus, deinde breviter angulatim acclivibus, postremo transversis (haud concentricis); costâ umbonali angulatâ, margaritâ albâ, dentibus cardinalibus magnis, haud laminatis.*

THE WALNUT UNIO. Shell very small, solid, oblong-subrhombic, obliquely biangulated behind, of a uniform dark olive, everywhere boldly sculptured by coarse folds, which in front run obliquely downwards towards the centre of the disk, then diverge for a brief space upwards, and finally slope almost transversely (not concentrically) to the hinder margin; umbonal ridge angular, nacre white, cardinal teeth large, not laminar.

DUNKER, Zeitschr. Malak. 1848, p. 182.

Hab. China (teste Dunker).

Reminds one of a young *Osbeckii*. The anterior side is short, the beaks rather prominent, and the concave area beneath the ligament is usually marked with a few fine divergent raised wrinkles.

Species 374. (Mus. Hanley.)

UNIO NILOTICUS. *Un. testâ parvâ, validâ, ovali-subquadratâ, subventricosâ, olivaceâ concolore, rugis elevatis rudibus (et anticè confertis) concentricè sculptâ, latere antico haud peculiariter brevi, latere postico subbiangulato; margine ventrali vix retuso; areâ posticâ extremâ concavâ, liris obliquis divergentibus confertim ornatâ, natibus acutis, haud eminentibus, lunulâ profundâ, lanceolatâ, margaritâ nitidè albido-rubescente, dentibus cardinalibus sublaminatis.*

THE NILE UNIO. Shell small, strong, subquadrately oval, subventricose, of a uniform olivaceous tint, with coarse, raised, concentric corrugations, which in front are densely arranged, anterior side not very short, posterior side subbiangulated; ventral margin scarcely indented; extreme posterior area concave, and adorned by crowded, obliquely divergent raised lines; beaks acute, not prominent, lunule deep, lanceolate, nacre brilliant, with a pinkish cast, cardinal teeth somewhat lamellar.

CAILLAUD, Voy. à Méroë, vol. ii. pl. 61. f. 8, 9.

Hab. The river Nile.

The beaks are adorned with two rows of grains, besides some less marked diverging raised lines. The sculpture is that of the Indian species. The *U. pumilio* of Ziegler (MSS.?), and the *U. Parreysii* (our *Ægyptiacus*) of Von dem Busch (in Philippi, Ab. N. C. vol. iii. Unio, pl. 5. f. 6), are given as synonyms by Lea.

Species 375. (Mus. Hanley.)

UNIO MEDIUS. *Un. testâ parvâ, solidâ, ventricosâ, ovali-subrhomboideâ, luteâ, maculis subquadratis nigro-viridibus, serie unicâ, posticè ornatâ, extremitate postica obtusissimè subbiangulatâ; margine ventrali convexo, anticè acclivi; margaritâ albâ, dentibus cardinalibus validis, permagnis, pyramidalibus.*

THE INTERMEDIATE UNIO. Shell small, solid, inflated, subrhombic oval, yellow, with a posterior radiating row of somewhat square distant dark-green spots; posterior extremity very bluntly subbiangulated; ventral margin decidedly convex, rising in front; nacre white, cardinal teeth very large, strong, pyramidal.

LEA, Obs. on Unio, vol. viii. p. 82. pl. 10. f. 227.

Hab. Coosa river, Alabama, North America.

The rather inconspicuous umbonal ridge is preceded by a single row of spots.

Species 376. (Mus. Hanley.)

UNIO CORDATUS. *Un. testâ subcordato-pyramidali, solidâ, ad umbones inflatâ, posticè compressâ; fusco-castanea, lævigatâ, anticè perbrevi, subtruncatâ, infernè peculiariter rotundatâ, posticè rotundato-subcuneiformi; margine ventrali anticè arcuato, posticè incurvato; natibus valde eminentibus, lunulâ latâ, dentibus cardinalibus magnis, valde laciniatis.*

THE HEART-SHAPED UNIO. Shell subcordate-pyramidal, solid, swollen at the umboes, compressed behind, smooth, chestnut-brown, anterior side very short, subtruncated, peculiarly rounded below, hinder extremity rotundately subcuneiform; ventral margin arched in front, incurved behind; beaks very promi-

nent, lunule broad, cardinal teeth large, much laciniated.

CONRAD (as of Rafin.), Monogr. Unio, p. 48. pl. 25.

Hab. Tennessee, North America.

The valves are concave before the umbonal ridge, the stages of increase rather distant, the hinge-margin broad, and the nacre usually devoid of colour. The species is closely allied to *ebenus*, but the front dorsal margin is much longer, and the lunule seems to differ; it has not the shape of an arrow-head.

Species 377. (Mus. Hanley.)

UNIO RUFUSCULUS. *Un. testâ parvâ, obliquè subovatâ, solidâ, castaneâ, lævigatâ, satis convexâ; margine ventrali in medio vel recto, vel subretuso, anticè arcuatim et subrepente acclivi; natibus haud eminentibus, margaritâ rufescente, dentibus cardinalibus haud transversis.*

THE LITTLE RED UNIO. Shell small, obliquely subovate, solid, chestnut-brown, not sculptured, moderately convex; ventral margin straightish, or very slightly retuse in the middle, arched and rather abruptly rising in front, beaks not prominent, nacre reddish cardinal teeth nearly perpendicular.

LEA, Obs. on Unio, vol. v. p. 14. pl. 14. f. 7.

Hab. Abbeville district, South Carolina.

The ligament is large and prominent.

Species 378. (Mus. Hanley.)

UNIO PHASEOLUS. *Un. testâ compressâ, infernè in medio concaviusculâ, elongato-subovatâ, subinæquilaterali, luteâ, radiis latis viridibus interruptis confertim pictâ, lævigatâ; posticè attenuatâ, obtusè subbiangulatâ, in exemplis adultis subcuneiformi; margine ventrali retuso, anticè autem arcuato; lunulâ valde profundâ, lanceolatâ, umbonibus satis eminentibus, natibus acutis, margaritâ albâ, dentibus cardinalibus magnis, pyramidalibus.*

THE FRENCH-BEAN UNIO. Shell compressed, somewhat concave in the middle near the lower edge, elongated subovate, not very inequilateral, dirty yellow, with numerous broad, interrupted, green rays, not sculptured, hinder side tapering, bluntly subbiangulated, somewhat wedge-shaped in the adult; ventral margin retuse in the middle, but arched in front; lunule excavated, lanceolate, umboes rather prominent, beaks acute, nacre white, cardinal teeth large, pyramidal.

HILDRETH, Amer. Journ. Sc. vol. xiv. p. 283; Say, Amer. Conch. pl. 22.

Unio planulatus, Lea, Obs. on Unio, vol. i.

Hab. River Wabash, etc., North America.

Species 379. (Mus. Hanley.)

UNIO GIBBOSUS. *Un. testâ ponderosâ, oblongo-acuminatâ, anticè brevi et ventricosâ, posticè compressâ, luteâ, radiis viridibus compositis confertim pictâ, lævigatâ; margine ventrali magis minusve arcuatâ; areâ posticâ dorsali angustâ, lunulâ magnâ, profundâ, margaritâ albidâ, dentibus cardinalibus magnis, laciniatis, pyramidalibus.*

THE GIBBOUS UNIO. Shell heavy, peaked oblong, short and ventricose in front, compressed behind, dirty yellow, densely painted with green compound rays, not sculptured; ventral margin more or less arched, umbonal slope narrow, lunule large, profound, nacre white, cardinal teeth large, jagged, pyramidal.

BARNES, Silliman, J., vol. vi. pl. 11. f. 12.

Unio dilatatus, Conrad (as of Raf.).

Hab. Upper Mississippi and Missouri, North America.

The hinder side tapers above and below to a blunt peak.

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UNIO.

PLATE LXXIV.

Species 380. (Mus. Hanley.)

UNIO ELEGANS. *Un. testâ solidâ, ventricosâ, subtriangulari, subinæquilaterali, lævigatâ, squalidè virescente, lineis saturatioribus brevibus acutangularibus undique radiatim reticulatâ, costâ umbonali conspicuâ, et nates versus aculas eminentes, valde inclinatas angulatâ; lunulâ profundâ, satis magnâ; areâ posticâ extremâ planulatâ; margaritâ albidâ; dentibus cardinalibus validis, pyramidalibus.*

THE ELEGANT UNIO. Shell very strong, ventricose, subtriangular, less inequilateral than usual, not sculptured, of a dull greenish hue, painted with approximate radiating rows of short dark acutangular lines, which form a kind of net-work over the entire surface; ventral margin much arcuated, especially behind; umbonal ridge well marked, angular near the beaks, which are prominent, acute, and much inclined; lunule deep, rather large; umbonal slope flattened; nacre white; cardinal teeth strong, large, pyramidal.

LEA, Obs. on Unio, vol. i. pl. 19. f. 13.

Unio truncatus, Say (as of Raf.), Am. Con. pl. 67.

Hab. Rivers Wabash, Scioto, Ohio, etc., N. America.

Towards the lower corner of the umbonal slope, which, as well as the vicinity of the lunule, is greenish-yellow, the zigzag markings are changed into broken radiating lines; the angular ones upon the disks have their points directed towards the beaks.

Species 381. (Mus. Hanley.)

UNIO VARIABILIS. *Un. testâ tenui, haud magnâ, obovato-subrhomboideâ, anticè angustâ, posticè magis minusve ventricosâ, flavo-olivaceâ, concolore, liris incrementi (præsertim anticè) confertim corrugatâ, supernè plicis magnis radiatâ; areâ posticâ dorsali latâ, lævigatâ; margine dorsali anticè demisso, posticè acclivi, angulato; margine ventrali utrinque acclivi; umbonibus latiusculis, satis eminentibus; margaritâ albido-cærulescente; dentibus cardinalibus laminatis.*

THE VARIABLE UNIO. Shell thin, not large, obovate-subrhomboid, narrow in front, more or less swollen behind, of an uniform olivaceous yellow, with close-set raised wrinkles of increase, which are more evident in front than behind, embossed on the umbonal region with large radiating folds, which do not usually reach to the broad concave and comparatively smooth umbonal slope; dorsal margin falling in front, rising and angulated behind; ventral margin rising at both extremities; umboes somewhat broad, rather prominent, nacre bluish-white; cardinal teeth lamellar.

MATON, Tr. Linn. Soc. vol. x. p. 327. pl. 24. f. 4–7.

Unio membranaceus, Philippi.

Hab. Rio de la Plata, S. America.

The anterior side is much narrowed by the sudden fall of the dorsal line, which rises behind the umboes so as to give a wing-like appearance to that portion of the shell.

Species 382. (Mus. Hanley.)

UNIO ELLIPTICUS. *Un. testâ parvâ, compressâ, suborali, olivaceâ, haud radiatâ, anticè prope nates rudè corrugatâ, posticè lævi; margine dorsali postico haud declivi; margine ventrali convexo, vix minimè retuso; lunulâ nullâ; natibus rugis elevatis (anticè subgranosis) concentricè ornatis; margaritâ albido-cærulescente; dentibus cardinalibus laciniatis, haud transversis.*

THE ELLIPTIC UNIO. Shell small, compressed, suboval, olive-coloured, not rayed, coarsely wrinkled in front near the beaks, smooth behind; hinder dorsal margin not sloping, ventral margin convex, scarcely indented, no distinct lunule; beaks adorned with raised corrugations, which are somewhat granular in front; nacre bluish-white; cardinal teeth jagged, not transverse.

SPIX, Test. Bras. pl. 26. f. 1, 2.

Unio multistriatus, Lea.

Unio psammactinus, Bronn.

Hab. Bahia, Brazil.

A few raised divergent lines are usually visible at the commencement of the umbonal slope, which is not defined by a marked ridge. The valves are rather thin, and their nacre is disfigured by olivaceous stains in the umbonal cavity.

Species 383. (Mus. Hanley.)

UNIO OREGONENSIS. *Un. testâ validâ, subinæquilaterali, elongato-subovali, posticè obtusissimè subbiangulatâ,*

subventricosâ, sublævigatâ, luteo-olivaceâ, lineis nigro-viridibus obscuris multis supernè radiatâ; margine ventrali subrecto; areâ posticâ extremâ latâ; costâ umbonali conspicuâ; lunulâ nullâ; margaritâ albâ; dentibus cardinalibus valde laciniatis, pyramidalibus.

THE OREGON UNIO. Shell strong, elongated suboval, not particularly inequilateral, very bluntly subbiangulated behind, subventricose, nearly smooth, dull olivaceous yellow, painted above with numerous obscure radiating lines of dusky green; ventral margin scarcely indented; umbonal area broad; the ridge distinct; no lunule; nacre white; cardinal teeth much jagged, pyramidal.

LEA, Obs. on Unio, vol. v. p. 31. pl. 22. f. 33.

Hab. Columbia river, Oregon.

The painted lines are more densely disposed towards the ligament.

Species 384. (Mus. Hanley.)

UNIO GLEBULUS. *Un. testâ satis parvâ, solidâ, ventricosâ, rotundato-ovali, vix inæquilaterali, flavido-olivaceâ, sublævigatâ; margine dorsali subarcuato, vix declivi, utrinque angulato; margine ventrali arcuato, utrinque (et anticè præsertim) acclivi; natibus latiusculis, depressis; lunulâ angustâ; margaritâ albido-rubescente, nitidissimâ; dentibus cardinalibus solidis, valde laciniatis, haud laminatis; dentibus lateralibus arcuatis.*

THE LITTLE CLOD UNIO. Shell rather small, solid, ventricose, rounded-oval, not so very inequilateral, yellowish olive, nearly smooth; dorsal margin curved, yet scarcely sloping, angulated at each extremity; ventral margin arched, rising at both ends, but especially in front; beaks rather broad, depressed; lunule narrow; nacre silvery, white with a pinkish cast, very iridescent; cardinal teeth much jagged, solid, not lamellar; lateral teeth curved.

SAY, Amer. Conch. pl. 34.

Unio subglobosus, Lea.

Hab. Bayou Teche, Louisiana, N. America.

This is stated by Lea to be the *U. rotundatus* of Lamarck, which no one would surmise from the description. Its umbonal ridge is well marked, the succeeding area decidedly narrow.

Species 385. (Mus. Hanley.)

UNIO CALAMITARUM. *Un. testâ parvâ, validâ, ovali-subreniformi, anticè brevi, compressiusculâ, fusco-olivaceâ, supernè confertim et concentricè corrugatâ; margine dorsali antico declivi, margine ventrali incurvato; natibus acutis, valde inclinatis; lunulâ magnâ, profundâ; margaritâ squalidè albâ; dentibus cardinalibus magnis, validis, haud transversis; dentibus lateralibus arcuatis.*

THE REED-DWELLING UNIO. Shell small, strong, oval-subreniform, short in front, rather compressed, dusky olive, densely wrinkled concentrically near the beaks; front dorsal edge sloping; ventral margin incurved; beaks acute, much inclined; lunule large, profound; nacre dirty white, cardinal teeth large, strong, not transverse, lateral teeth curved.

MORELET, Testac. Nov. vol. i. p. 30.

Hab. Baluntié, near Palenque.

The imperfect state of specimens renders a more complete description impossible. The hinder extremity is rather broad.

Species 386. (Mus. Hanley.)

UNIO LUTULENTUS. *Un. testâ tenui, compressissimâ, luteo-olivaceâ, haud radiatâ, sublævigatâ; areâ posticâ extremâ latâ, rugis divergentibus brevibus remotis sparsim sculptâ; margine dorsali posticè acclivi, convexiusculo; margine ventrali vix subretuso, natibus haud eminentibus; margaritâ squalidè albidâ; dentibus cardinalibus laminatis.*

THE MUDDY UNIO. Shell thin, much compressed, of a yellowish olive-green, not rayed, nearly smooth, with a few distant obscure, short, divergent corrugations on the broad umbonal slope; hinder dorsal edge somewhat curved and elevated; ventral margin scarcely retuse; beaks not prominent; nacre dirty white; cardinal teeth laminar.

GOULD, Proc. Boston Soc. N. H. vol. iii. p. 295.

Hab. New Zealand.

The umbonal ridge is not elevated. The nacre is usually more or less stained in the umbonal cavity.

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Sowerby del et lith.

Vincent Brooks Day & Son, Imp.

U N I O.

PLATE LXXV.

Species 387. (Mus. Hanley.)

UNIO PLICIFERUS. *Un. testâ parvâ, ovali-oblongâ, haud peculiariter inæquilaterali, posticè obtusè subbiangulatâ, olivaceo-nigrescente, haud variegatâ, magis minusve ventricosâ, liris acutis divergentibus in areâ posticâ, alias oppositas obsoletiores sequentibus, ornatâ; margine dorsali postico, haud declivi; margine ventrali convexiusculo; margaritâ lividâ; dentibus cardinalibus magnis, haud laminatis.*

THE PLAIT-BEARING UNIO. Shell small, oval-oblong, not particularly inequilateral, bluntly subbiangulated behind, dusky olive, not variegated, more or less ventricose; adorned by sharp diverging strings on the umbonal slope, and obscure ones running in the opposite direction upon the middle of the valves; ligamental edge not sloping; ventral margin rather convex; nacre livid; cardinal teeth large, not laminar.

LEA, Obs. on Unio, vol. ii. p. 61. pl. 17. f. 53.

Unio carbonarius, Lea (old).

Unio plexus, Conrad, teste Lea.

Hab. Mexico.

The species so designated in an earlier Plate bears no resemblance to the original figure of Lea.

Species 388. (Mus. Hanley.)

UNIO LIENOSUS. *Un. testâ parvâ, oblongo-subovali, anticè angustâ et vix peculiariter brevi, subventricosâ, lævi, olivaceo-cinerascente, concolore; margine dorsali postico rectiusculo, haud declivi; margine ventrali incurvato; umbonibus haud eminentibus; natibus acutis; lunulâ lanceolatâ; margaritâ nitidissimâ, sæpius subpurpureâ, aliquando pallidè rubro-aurantiâ, raro albidâ.*

THE SPLEEN-LIKE UNIO. Shell small, oblong-suboval, narrow and not particularly short in front, somewhat ventricose, smooth, ashy olive-coloured, not variegated; hinder dorsal edge nearly straight, not sloping; ventral margin incurved; umboes not prominent; beaks acute; lunule sharply defined, lanceolate; nacre brilliant, usually purplish, sometimes salmon-coloured, rarely white.

CONRAD, Mon. Unio, p. 60. pl. 34. f. 2.

Hab. Greene county, Alabama.

A moderately strong species, of which the female differs so much from the male, that the identity is not easily perceptible: in the former the lower hinder extremity is obliquely cut off. The umbonal ridge is not conspicuous, and is followed by a shallow groove. In a previous Plate another species has erroneously received the same name.

Species 389. (Mus. Hanley.)

UNIO TERETIUSCULUS. *Un. testâ parvâ, elongatâ, subventricosâ, cinereo-virescente, marginem versus subluteâ, lineis obscuris viridibus confertim radiatâ, sublævigatâ; natibus acutis, porcis tenuissimis (anticè obliquis, posticè acutangularibus), ornatis; margine dorsali minimè declivi, utrinque angulato; margine ventrali retuso; costâ umbonali conspicuâ; lunulâ angustâ, profundâ; margaritâ albâ; dentibus cardinalibus sublaminatis.*

THE TREE-TRUNK UNIO. Shell small, elongated, subventricose, dirty yellow towards the margin, greenish ash-coloured above, densely rayed with more or less obscure green lines, not sculptured excepting upon the acute beaks, which are adorned by very fine ridges that are oblique in front, and acutely angular behind; dorsal edge not sloping, angulated at each end; ventral margin retuse; umbonal ridge conspicuous; lunule narrow, profound; nacre white; cardinal teeth sublamellar.

PHILIPPI, Abbild. N. Conc. vol. iii. Unio, pl. 3. f. 3.

Unio Calliaudi, Férussac (teste Lea).

Unio lithophagus, Ziegler (teste Lea).

Hab. Sennaar.

For its size this is rather a strong shell. Its linear rays become very narrow and indistinct anteriorly.

Species 390. (Mus. Hanley.)

UNIO FALCATUS. *Un. testâ elongatâ, falcatâ, valde inæquilaterali, subfuscâ, concolore, lineis incrementi rudibus tantum rugatâ, disco subexcavato; marginibus subparallelis, umbonibus paululum eminentibus; margaritâ pallidè purpurascente; dentibus lateralibus nullis; dente cardinali in valvâ dextrâ elevato, trigono, in valvâ sinistrâ longitudinali, compresso-triangulari.*

THE HOOKED UNIO. Shell elongated, hooked, very inequilateral, of an uniform brownish hue, merely roughened by coarse lines of increase; disk some-

what hollowed; margins subparallel; umboes slightly raised; nacre of a peach-blossom colour, no lateral teeth; primary tooth of the right valve prominent and triangular, in the left valve longitudinal and compressed.

GOULD (*Alasmodonta*) Proc. Bost. Soc. N. H. vol. iii. p. 294; Exped. Shells, p. 433. f. 545.

Hab. Oregon, California.

Often confused with *margaritifera*, but easily distinguishable by its form, nacre, etc.

Species 391. (Mus. Hanley.)

UNIO FAMELICUS. *Un. testâ tenui, compressâ, oblongo-elongatâ, subreniformi, utrinque rotundatâ, posticè valde productâ, olivaceâ, concolore, sublævigatâ; margine dorsali postico convexiusculo; margine ventrali retuso; costâ umbonali nullâ; natibus erosis, haud eminentibus; margaritâ albido-cærulescente, maculis lividis fucatâ; dentibus cardinalibus transversis.*

THE STARVED UNIO. Shell thin, compressed, elongated-oblong, subreniform, rounded at both ends, much produced behind, of an uniform olive-colour, almost smooth; hinder dorsal margin rather convex; ventral edge retuse; no distinct umbonal ridge; beaks eroded, not prominent; nacre bluish-white, with livid stains; cardinal teeth transverse.

GOULD, Proc. Boston Soc. N. H. vol. iii. p. 294.

Hab. Walla Walla, Oregon, North America.

The wrinkles of increase are numerous, and well marked: the tint ranges from yellowish to ferruginous olive.

Species 392. (Mus. Hanley.)

UNIO CAPIGLIOLO. *Un. testâ tenui, compressâ, elongatâ, haud peculiariter inæquilaterali, olivaceâ, concolore, sublævigatâ, anticè angustius rotundatâ, posticè subbiangulatâ; margine postico dorsali leniter acclivi, convexiusculo; margine ventrali retuso, anticè arcuatim acclivi; lunulâ nullâ; natibus acutis, satis eminentibus; margaritâ albidâ; dentibus cardinalibus transversis.*

CAPIGLIOLO'S UNIO. Shell thin, compressed, elongated, less inequilateral than usual, of an uniform olive-colour, nearly smooth, narrow and rounded in front, bluntly subbiangulated behind; posterior dorsal edge a little rising and slightly curved; ventral margin retuse, arching upwards in front; no distinct lunule; beaks acute, moderately projecting; nacre whitish, cardinal teeth transverse.

PAYRAUDEAU, Cat. Moll. Corse, p. 66. pl. 2. f. 4.

Hab. Corsica, etc.

A moderately large shell, allied to, yet perfectly distinct from, *pictorum*. The umbonal ridge is not elevated.

Species 393. (Mus. Hanley.)

UNIO DEHISCENS. *Un. testâ elongatâ, subinæquilaterali, tenui, depressâ, subcylindraceâ, anticè infernè hiante, nitidè flavâ, olivaceo-viridi, obscurè radiatâ, lævigatâ; margine dorsali antico vix minimè declivi; margine ventrali anticè arcuatim acclivi; lunulâ, costâque umbonali inconspicuis, umbonibus haud eminentibus; margaritâ supernè purpureâ, infernè albidâ; dentibus imperfectis.*

THE GAPING UNIO. Shell elongated, less inequilateral than usual, thin, depressed, somewhat cylindraceous, gaping ventrally in front, glossy yellow, with obscure olivaceous green rays, smooth; front dorsal edge scarcely at all sloping; ventral margin arching upwards in front; lunule and umbonal ridge inconspicuous, umboes not projecting; nacre purple above, whitish below; teeth imperfect.

SAY, Amer. Conch. pl. 24.

Unio oriens, Lea, Trans. Amer. Ph. Soc. N. S., vol. iv. pl. 6. f. 5; Obs. Unio, vol. i. p. 83. pl. 6. f. 5.

Hab. Ohio.

The teeth are quite rudimentary. The anterior side is actually the broader, the hinder extremity being attenuated. Lea, in his Synopsis, regards the species as a *Margaritana*.

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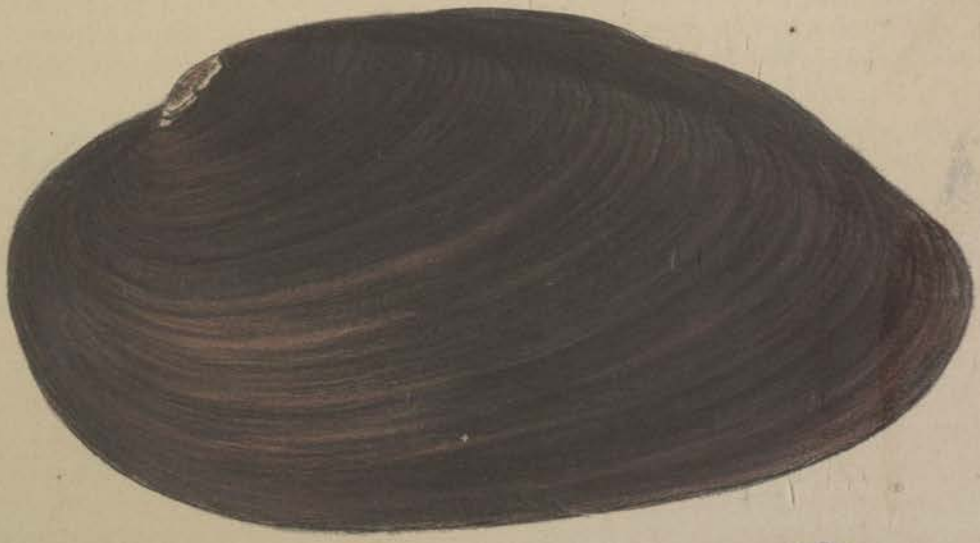

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Sowerby del et lith.

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UNIO.

PLATE LXXVI.

Species 394. (Mus. Hanley.)

UNIO FABULA. *Un. testâ parvâ, oblongo-subquadratâ, subinæquilaterali, validâ, depressâ, epidermide tenuissimâ cinereo-virescente radiis olivaceis infernè ornatâ in exemplis perfectis vestitâ, lævigatâ, plicis rudissimis paucis arcuatis ad umbones compressas (vel retusas) posticè undatâ; margine dorsali anticè declivi, posticè subdeclivi; extremitate posticâ biangulatâ; margine ventrali in medio retuso, anticè acclivi; areâ posticâ dorsali latâ, magis minusve concavâ; natibus acutis, satis eminentibus; lunulâ inconspicuâ; margaritâ rubro-aurantiâ; dentibus lateralibus nullis.*

THE LITTLE BEAN UNIO. Shell small, squarish-oblong, scarcely inequilateral, strong, depressed, covered with a peculiarly thin epidermis of greenish ash-colour, adorned with olive rays beneath, smooth, but with a few very coarse arched, transverse folds on the hinder side of the more or less retuse umbonal region; dorsal edge sloping in front, less so behind; hinder extremity biangulated; ventral margin indented in the middle, rising in front: dorsal posterior area broad, more or less concave; beaks acute, moderately projecting; lunule indistinct; nacre orange-red; no lateral teeth.

LEA (*Margaritana*), Trans. Amer. Ph. Soc. vol. vi. (and Obs. Unio, vol. ii. p. 44), pl. 13. f. 39.

Hab. Cumberland river, Tennessee.

The upper angle of the hinder side projects beyond the lower one. The hinder primary tooth of the left valve is incurved at the top. Seems only a form of *Carreyana*.

Species 395. (Mus. Hanley.)

UNIO DELTOIDEUS. *Un. testâ parvâ, validâ, subovali, ventricosâ (et præsertim posticè), vix inæquilaterali, pallidè luteâ, radiis cæruleo-viridibus (in medio latioribus) pulchrè ornatâ, lævigatâ, ad umbones, autem, plicis rudibus perpaucis (2–3) remotis, continuis, transversim undulatâ; extremitate posticâ obtusè subbiangulatâ; margine ventrali vix retuso, anticè arcuatim acclivi; costâ umbonali latâ, rotundatâ; natibus acutis, satis eminentibus; lunulâ nullâ; margaritâ albidâ, dentibus lateralibus nullis.*

THE TABLET UNIO. Shell small, strong, suboval, ventricose (especially behind), scarcely inequilateral, pale ashy yellow adorned with bluish-green rays, which are broader in the middle, smooth, except on the extreme umbonal region, which has two or three distant, continuous, coarse, transverse folds; hinder extremity bluntly subbiangulated; ventral margin scarcely at all indented, arching upwards behind; umbonal ridge broad, rounded; beaks acute, moderately projecting; no lunule; nacre white; no lateral teeth.

LEA (*Margaritana*), Trans. Amer. Ph. Soc., vol. vi. (and Obs. Unio, vol. ii. p. 43), pl. 13. f. 38.

Hab. Ohio river, near Cincinnati, N. America.

In perfect examples there are a very few small and close longitudinal ridges in front of the beaks. The rays are so broad in the middle as to appear the ground-colour. The likeness to *calceolus* is unpleasantly striking; Lea remarks, however, that the front lobe of the teeth seems larger in this, the hinder one in the allied species; moreover, that is a smaller shell, more flattened, and with its undulations unbroken.

Species 396. (Mus. Hanley.)

UNIO SWAINSONI. *Un. testâ parvâ, solidissimâ, tumidâ, obliquè ovali-ellipticâ, utrinque rotundatâ, valde inæquilaterali, epidermide tenui luteo-subolivaceâ vestitâ, lævigatâ, plicis autem paucis permagnis ad umbones eminentes ornatâ; margine ventrali convexo, anticè acclivi; lunulâ profundâ; margaritâ albidâ; margine cardinali lato; cavitate umbonali profundissimâ; dentibus cardinalibus magnis; dentibus lateralibus nullis.*

SWAINSON'S UNIO. Shell small, very solid, tumid, obliquely oval-elliptic, rounded at each end, very inequilateral, clothed with thin epidermis, that is of a dirty or slightly olivaceous-yellow, smooth, but with a few very broad transverse folds on the prominent umboes; ventral margin convex, rising in front; lunule deep; nacre white; hinge margin broad; umbonal cavity very profound; primary teeth large, no lateral teeth.

HANLEY, for *Uniopsis radiata*, Swains. Malac. f. 62, changed to *Mytiloides*, p. 382.

Hab. —— ?

A very peculiar almond-shaped shell, which is much thinner behind than in front. The anterior muscular scars are peculiarly deep, and the hinder tooth of the left valve is conspicuously forked. As both the published

names had previously been attached to other species, it has been necessary to change the specific appellation. By a typographical error in Lea's Synopsis, the *Uniopsis Mytiloides* was referred to the Unio so named by Rafinesque.

Species 397. (Mus. Hanley.)

UNIO ELONGATUS. *Un. testâ magnâ, oblongâ, solidâ, convexâ, nigro-piceâ, concolore, sublævigatâ, plicis incrementi tantum corrugatâ, utrinque rotundatâ, anticè attenuatâ; margine ventrali in medio vix subretuso, anticè arcuatim acclivi; lunulâ, costâque umbonali nullis, umbonibus vix eminentibus, natibus acutis, inflexis; margaritâ albido-lividâ, maculis olivaceis fucatâ; dentibus lateralibus nullis.*

THE LONG UNIO. Shell large, oblong, solid, convex, of an uniform pitchy black, smooth, except for the pliciform wrinkles of increase, rounded at each end, tapering in front; ventral margin scarcely at all indented in the middle, arching upwards in front; neither a lunule nor an umbonal ridge, umboes scarcely projecting; beaks acute, inflected; nacre livid white, with stains of olive-colour; no lateral teeth.

LAMARCK, Anim. sans Vert., vol. vi. pt. 1. p. 70.

Hab. Europe.

Allied to *margaritiferus*, but not incurved ventrally.

Species 398. (Mus. Hanley.)

UNIO HOLSTONIANUS. *Un. testâ parvâ, subtenui, nitidâ, convexâ, subovali, olivaceâ, concolore, lævigatâ; margine ventrali in medio vix subretuso; lunulâ, costâque umbonali nullis, umbonibus haud eminentibus, margaritâ albido-cærulescente, nitidissimâ; margine cardinali angustâ; dentibus lateralibus nullis.*

HOLSTON RIVER UNIO. Shell small, rather thin, glossy, convex, suboval, of an olive-colour, not variegated, smooth; ventral margin scarcely in the least indented; neither a lunule nor an umbonal ridge; umboes not projecting; nacre bluish-white, brilliant; hinge-margin narrow; no lateral teeth.

LEA, (*Margaritana*), Trans. Amer. Ph. Soc., second ser. vol. vi. (and Obs. Unio, vol. ii.) pl. 13. f. 13.

Hab. Holston river, U. S. North America.

There are usually some orange stains upon the nacre in the umbonal cavity; the single primary tooth in the right valve is large and subtriangular.

Species 399. (Mus. Hanley.)

UNIO UNDULATUS. *Un. testâ ovatâ, subæquilaterali, validâ, nitidissimâ, ventricosâ, saturatè olivaceâ, obscurè subradiatâ, lævigatâ, ad umbones, autem, plicis paucis, permagnis remotis, posticè dilatatis et arcuatim declivibus, subtransversim undatâ; margine ventrali arcuato; umbonibus satis eminentibus, natibus ipsis parvis inflexis; lunulâ parvâ, lanceolatâ; margaritâ albâ, dentibus cardinalibus nullis.*

THE WAVED UNIO. Shell ovate, subequilateral, strong, very glossy, ventricose, dark olive, indistinctly subradiated, smooth, but waved at the umboes by a few very large distant somewhat transverse folds, which on the hinder side become dilated, and arch downwards; ventral edge arcuated; umboes moderately elevated, the beaks themselves small and inflected; lunule small, lanceolate; nacre white, no lateral teeth.

SAY, Nichols. Encyc. (ed. Americ.), vol. iv. pl. 3. f. 3.

Alasmodonta sculptilis (young), Say.

Mya undulata, Wood.

Unio hians, Valenc. (teste Lea).

Unio glabrata, Sowerby (teste Lea).

Hab. Massachusetts, etc., North America.

Species 400. (Mus. Hanley.)

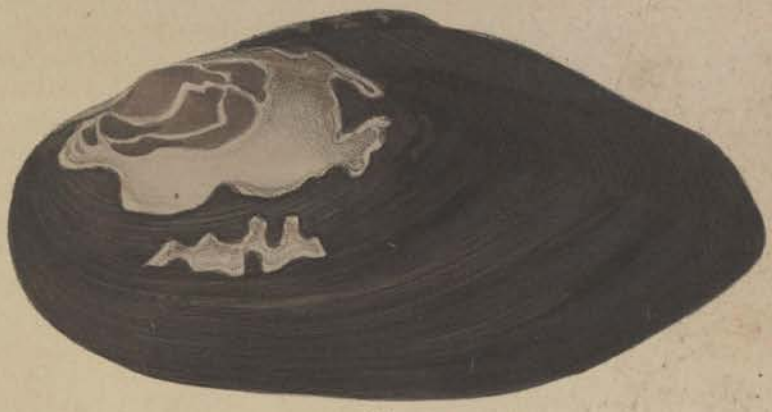
UNIO SIKKIMENSIS. *Un. testâ parvâ, satis validâ, subventricosâ, obliquè obovatâ, luteâ, concolore, sublævigatâ; margine ventrali arcuato, utrinque (et anticè præsertim) acclivi; costâ umbonali nullâ; margaritâ albidâ, maculis lividis fucatâ; margine cardinali lato, valde arcuato; dentibus cardinalibus validis, laciniatis, haud laminatis.*

THE SIKKIM UNIO. Shell small, rather strong, subventricose, obliquely obovate, of an uniform dirty yellow, not sculptured; ventral margin arched, rising more particularly in front, no umbonal ridge; nacre whitish with livid stains; hinge-margin broad, much arcuated, cardinal teeth strong, jagged, not lamellar.

LEA, Obs. on Unio, vol. vii. p. 69. pl. 39. f. 131.

Hab. Sikkim, East Indies.

The aspect of this insignificant-looking *Unio*, whose eroded umboes preclude a more extended description, is rather that of a native of North America than of Continental India.



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Sowerby del. et lith.

Vincent Brooks Day & Son, Imp.

UNIO.

PLATE LXXVII.

Species 401. (Mus. Hanley.)

UNIO CORRIANUS. *Un. testâ oblongâ, valde inæquilaterali, anticè angustatâ, posticè productâ et subrostratâ, sæpius depressâ, nigrâ concolore, lævi, margine dorsali postico subarcuato, margine ventrali subretuso, costâ umbonali inconspicuâ, areâ extremâ posticâ concavâ, lunulâ nullâ, umbonibus erosis, haud eminentibus, margaritâ albidâ, supernè autem lividâ vel luteo-subolivaceâ, dentibus cardinalibus vix laminatis, postico in valvulâ dextrâ satis magno, satis valido, laciniato, angulato.*

CORRIE'S UNIO. Shell oblong, very inequilateral, narrowed in front, produced and somewhat beaked behind, usually depressed, of an uniform black, not sculptured, hinder dorsal margin somewhat rising; ventral edge somewhat indented, umbonal ridge not conspicuous, umbonal slope concave; umboes eroded, not prominent, nacre whitish, but livid or yellowish-olive above; primary teeth scarcely lamellar, hinder one of the right valve moderately large, strong, jagged, and angular.

LEA, Trans. Amer. Ph. Soc. vol. v. p. 65 (Obs. vol. i.) pl. 9. f. 25.

Hab. Pegu (W. Theobald).

Of this species, which although closely allied to *marginalis* is yet easily distinguishable from its dentition, Lea has figured a young specimen. The example here delineated, being somewhat aged, is thicker and less depressed than usual; its lateral teeth are a little curved and somewhat shagreened.

Species 402. (Mus. Hanley.)

UNIO KIRTLANDIANUS. *Un. testâ subquadratâ, validâ, anticè perbrevi, posticè latè biangulatâ, ad umbones magis minusve ventricosâ, alibi depressâ, fusco-olivaceâ, supernè lineis brevibus saturatioribus obscurè radiatâ, sublævigatâ, sulcis incrementi tantum sculptâ, margine ligamentali vix declivi, margine ventrali anticè acclivi, costâ umbonali satis conspicuâ, areâ dorsali posticâ, latâ, umbonibus modicè eminentibus, margaritâ albâ, margine cardinali latissimâ, dentibus cardinalibus trigonis, laciniatis.*

KIRTLAND'S UNIO. Shell squarish, strong, very short in front, broadly biangulated behind, depressed except at the more or less ventricose umboes, olive-brown, faintly marked above with short linear darker rays, smoothish, merely sculptured by the grooves of increase, ligamental edge scarcely sloping, ventral margin rising in front, umbonal ridge tolerably conspicuous, umbonal slope broad, umboes moderately projecting, nacre white, hinge-margin very broad, primary teeth triangular and jagged.

LEA, Trans. Amer. Ph. Soc. ser. 2. vol. v. p. 98 (Obs. on Unio, vol. i.) pl. 14. f. 41.

Hab. Ohio, N. America.

In this species, allied to *subrotundus* of Lea, but flatter and darker, the epidermis is somewhat membranaceous.

Species 403. (Mus. Hanley.)

UNIO EXCAVATUS. *Un. testâ subtrigonâ, haud crassâ, valde inflatâ, subæquilaterali, anticè subplicatâ angustâ et p.rrectâ, posticè angulatâ et lævi, nitidissimè luteâ, vel concolore, vel lineis olivaceis subinterruptis posticè radiatâ, margine ventrali arcuato, umbonibus maximè eminentibus, natibus obliquis, costâ umbonali angulatâ, areâ posticâ extremâ planulatâ, ligamento brevi, margaritâ albidâ, dentibus cardinalibus conico-compressis, dentibus lateralibus magnis.*

THE HOLLOWED UNIO. Shell subtriangular, not thick, much swollen, nearly equilateral, narrow projecting and somewhat plicated in front, angular and smooth behind, of a polished dirty yellow, either without variegation or with indistinct somewhat interrupted olive-green linear rays on the hinder side, umboes remarkably prominent, beaks slanting, umbonal ridge angulated, the slope behind it flattened, ligament short, nacre whitish, cardinal teeth conic yet compressed, lateral teeth large.

LEA, Obs. on Unio, vol. vi. p. 71. pl. 13. f. 52.

Hab. Georgia and Alabama, N. America.

The hinder profile is heart-shaped, and the radiating concavity behind the umbonal slope leaves, by its indented termination, a decided hiatus. Both primary and lateral teeth are large; the former are double in both valves.

Species 404. (Mus. Hanley.)

UNIO ATROCOSTATUS. *Un. testâ magnâ, solidâ, subrhombeâ, maximè inæquilaterali, ventricosâ, olivaceâ con-*

colore, plicis permagnis rotundatis undique (nisi anticè) obliquè undatâ, plicis areæ dorsalis posticæ sursum divergentibus, costâ umbonali nullâ, lunulâ parvâ; umbonibus satis eminentibus, natibus obliquis, margaritâ albâ, anticè autem subpurpureo-iridescente; dentibus cardinalibus magnis, laciniatis, pyramidalibus.

The BLACK-RIBBED UNIO. Shell large, solid, subrhombic, especially inequilateral, ventricose, of an uniform olive colour, everywhere (except in front) obliquely waved by a few very big rounded folds, of which those on the umbonal slope diverge upwards, with no umbonal ridge, a small lunule; umboes moderately projecting, beaks slanting, nacre white (becoming however iridescent and slightly tinged with purple anteriorly); primary teeth big, jagged, pyramidal.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. x. pl. 2. f. 5; Obs. vol. iv. p. 44.

Hab. Alabama and Louisiana, N. America.

This is not the species erroneously so designated in Plate IV., which seems merely *heros;* it comes much closer to the *plicatus* of Plate V. It is perfectly distinct from the *perplicatus* as represented in Plate IX., but is considered by Conrad to be a synonym of his species (Proc. Philad. vol. i. p. 17).

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Sowerby, del et lith

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UNIO.

PLATE LXXVIII.

Species 405. (Mus. Hanley.)

UNIO BLANDIANUS. *Un. testâ rotundato-quadratâ, subinæquilaterali, ventricosâ, in medio radiatim concavâ, flavo-olivaceâ concolore, costâ umbonali latissimâ munitâ, concentricè rudè subplicatâ, anticè et in aream posticam dorsalem latam et concavam verrucis compressis largè ornatâ, margine ventrali incurvato, margine dorsali postico vix declivi, umbonibus eminentibus, margaritâ albâ; dentibus cardinalibus magnis, laciniatis, pyramidalibus.*

BLAND'S UNIO. Shell rotundately square, not very inequilateral, ventricose, with a ray-like hollow in the middle, of an uniform yellowish-olive, with a peculiarly broad umbonal ridge, coarsely subplicated concentrically, profusely adorned in front and upon the broad and concave umbonal slope with pinched, wart-like knobs, ventral edge incurved, hinder dorsal edge scarcely sloping, umboes prominent, nacre white; cardinal teeth big, jagged, pyramidal.

LEA, Journ. Ac. N. S., Philad. ser. 2. vol. iv. (and Obs. on Unio, vol. vi. p. 65), pl. 11. f. 47.

Hab. Coosa river, Alabama, and Othcaloga Creek, Georgia, N. America.

The posterior tubercles are arranged in more or less regular curved diverging rows. The stages of growth are close and subpliciform.

Species 406. (Mus. Hanley.)

UNIO TROOSTENSIS. *Un. testâ parvâ, validâ, vel subobliquè ovatâ, vel oblongâ, valde inæquilaterali, anticè subbiangulatâ, subventricosâ, lævi, olivaceâ, lineis confertis strigisque angustis saturatioribus undique (minus autem anticè, et nonnunquam obscuris) radiatâ, margine ventrali subretuso, et anticè acclivi, areâ posticâ dorsali concavâ, umbonibus satis eminentibus, lunulâ profundè excavatâ, margaritâ albâ, dentibus cardinalibus magnis, laciniatis, trigonis.*

TROOST'S UNIO. Shell small, strong, either somewhat obliquely ovate, or oblong, very inequilateral, subbiangulated in front, somewhat ventricose, smooth, olive, everywhere (less in front, and at times indistinctly) rayed with darker narrow streaks and crowded lines; ventral margin somewhat indented, rising in front, umbonal slope concave, umboes moderately prominent, lunule deeply excavated, nacre white, primary teeth large, jagged, triangular.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. v. (and Obs. on Unio, vol. i.), p. 71. pl. 10. f. 30.
Unio trabalis, Conrad.

Hab. Cumberland river, N. America.

It was impossible for Conrad to detect in the elongated male example delineated by Lea, his obliquely ovate *trabalis*. These sexual distinctions (which are not salient in other shells) are a source of continual difficulty in the American *Naiades*. The species is quite distinct from the one erroneously so termed in Plate XXXVIII.

Species 407. (Mus. Hanley.)

UNIO STRIATUS. *Un. testâ parvâ, solidiusculâ, nitidâ, ovali, posticè rotundato-subbiangulatâ, vix subventricosâ, flavo-subolivaceâ concolore, concentricè substriatâ, margine ventrali convexo, costâ umbonali inconspicuâ, lunulâ nullâ, natibus vix eminentibus, margaritâ cupreâ, dentibus cardinalibus laciniatis, subpyramidalibus.*

THE STRIATED UNIO. Shell small, rather strong, glossy, oval, rotundately subbiangulated behind, barely subventricose, of an uniform somewhat olivaceous yellow, concentrically substriated; ventral edge convex, umbonal ridge inconspicuous, no lunule, beaks scarcely projecting, nacre copper-coloured; primary teeth jagged and somewhat pyramidal.

LEA, Trans. Amer. Phil. Soc., ser. 2. vol. viii. (and Obs. on Unio, vol. iii. p. 41), pl. 12. f. 16.

Hab. Chattahoochie river, Columbus, Georgia, N. America.

Species 408. (Mus. Hanley.)

UNIO NIGER. *Un. testâ ovato-acuminatâ, solidissimâ, satis ventricosâ, subolivaceâ, obscurè radiatâ, lævigatâ, posticè cuneiformi, margine dorsali antico convexo, satisque declivi; margine ventrali convexo, vix minimè retuso, anticè arcuatim acclivi, costâ umbonali angulatâ, areâ posticâ planulatâ, umbonibus latis, lunulâ magnâ, excavatâ, margaritâ albido-livescente, margine cardinali lato, dentibus cardinalibus pyramidalibus, dentibus lateralibus crassis.*

THE BLACK UNIO. Shell peaked ovate, very solid, mo-

derately ventricose, somewhat olive-coloured, indistinctly rayed, smooth, wedge-shaped behind, front dorsal edge convex and moderately sloping; ventral edge convex, scarcely in the least indented, arching upwards in front, umbonal ridge angulated, hinder area flattened, umboes broad, lunule large and excavated, nacre livid white, hinge margin broad, cardinal teeth pyramidal, lateral teeth thick.

CONRAD (as of Raf.), Mon. p. 49. pl. 26.

Hab. Michigan, etc., N. America.

According to Lea, this is identical with the *crassidens* of Lamarck; it is necessary, at all events, to delineate a shell which bears no resemblance to our figure of that species.

Species 409. (Mus. Hanley.)

UNIO CONSANGUINEUS. *Un. testâ parvâ, maximè inæquilaterali, ovato-elongatâ, anticè solidâ ventricosâ et truncatâ, posticè tenui gradatim depressâ et subattenuatâ, luteâ concolore, lævigatâ, costâ umbonali nullâ, lunulâ satis magnâ et excavatâ, margine cardinali latissimâ, dentibus cardinalibus pyramidalibus, sulcato-laciniatis.*

THE KINDRED UNIO. Shell small, extremely inequilateral, elongated-ovate, in front solid ventricose and truncated, behind thin, gradually depressed and somewhat tapering, of an uniform dirty yellow; without umbonal ridge; lunule tolerably large and excavated, hinge-margin very broad, primary teeth pyramidal, jagged and grooved.

LEA, Proc. Ac. N. S., Philad. 1861, p. 60; Obs. on Unio, vol. viii. p. 71. pl. 7. f. 217.

Hab. Alabama and Georgia, N. America.

A heavy little shell, closely allied to *decisus* and its allies, yet clearly distinct. It is cuneiform in convexity, has the valves peculiarly shallow, and the muscular scars pre-eminently impressed. The teeth of the left valve being large and almost united at their origin, leave a peculiarly shaped undivided and capacious receptacle for them in the opposite hinge. The umboes of adult examples are almost invariably eroded.

Species 410. (Mus. Hanley.)

UNIO CALCEOLA. *Un. testâ parvâ, ovatâ, vel ovato-oblongâ, haud peculiariter inæquilaterali, validâ, subventricosâ, lævi, olivaceâ (seu sordidè viridi), radiis angustis pallidioribus undique ornatâ, margine ventrali vix minimè retuso, costâ umbonali inconspicuâ, lunulâ nullâ, umbonibus satis eminentibus et plicis paucis obliquè undulatis, margaritâ albido-cærulescente, dentibus lateralibus nullis, dente cardinali in valvulâ dextrâ conico-triangulari, dente cardinali antico in valvulâ sinistrâ postico majore.*

THE PEBBLE UNIO. Shell small, ovate or ovate-oblong, not especially inequilateral, strong, subventricose, smooth, olive (or dirty green), with very pale narrow rays over its entire surface, ventral margin scarcely at all indented, umbonal ridge not marked, no lunule, the moderately prominent umboes waved with a few slanting folds, nacre bluish-white, no lateral teeth, primary tooth in the right valve conic-triangular, front one in the left valve larger than the hinder.

LEA, Trans. Amer. Ph. Soc. vol. iii. (and Obs. on Unio, vol. i. p. 7), pl. 3. f. 1.

Alasmodonta truncata, Conr. not Say (teste Lea).

Hab. Ohio.

Suspiciously close to the less triangular forms of *deltoidea*, although adult examples can readily be discriminated. Lea points out that in the allied species it is the hinder tooth which is the larger.

Species 411. (Mus. Hanley.)

UNIO CORVUS. *Un. testâ parvâ, crassiusculâ, subovali, posticè subbiangulatâ, vix subventricosâ, fuscâ concolore, nisi supra costam umbonalem subangulatam sublævigatâ; aream dorsali posticâ liris obliquis supernè sparsim corrugatâ, umbonibus erosis, haud eminentibus, margaritâ albidâ, dentibus cardinalibus magnis, conico-triangularibus.*

THE CROW UNIO. Shell small, thickish, somewhat oval, subbiangulated behind, scarcely even subventricose, of an uniform dark brown, almost smooth, except beyond the somewhat angular umbonal ridge, behind which there are a few slanting raised wrinkles near the beaks; umboes eroded, not projecting; nacre whitish, primary teeth large, conic-triangular.

LEA, Journ. Ac. N. S., Philad. ser. 2. (and Obs. on Unio, vol. vii. p. 35), pl. 27. f. 97.

Hab. Georgia, N. America.

412.

413. *b.*

413. *a.*

414.

415.

416.

417.

Sowerby, del et lith.

Vincent Brooks, Day & Son, Imp.

UNIO.

PLATE LXXIX.

Species 412. (Mus. Hanley.)

UNIO OCCATUS. *Un. testâ parvâ, tenuiusculâ, depressiusculâ, ovali-subquadratâ, anticè angustatâ, posticè dilatatâ et subbiangulatâ, pallidè viridi, liris variis multis, obliquis subgranosis divergentibus supernè corrugatâ, anticè præterea rugis elevatis infernè ornatâ; liris anticis deorsum et retrorsum spectantibus, liris posticis tenuioribus subradiatim divergentibus et angulos acutos cum liris mediis majoribus supernè formantibus; costâ umbonali latâ, haud elevatâ, sed conspicuâ; lunulâ minimâ; aream dorsali posticâ latiusculâ et concavâ, natibus parvis, vixque obliquis, margaritâ albâ, dentibus cardinalibus in utrâque valvulâ 2, compresso-pyramidalibus, haud transversis.*

THE HARROWED UNIO. Shell small, thinnish, rather depressed, of a somewhat square-oval shape, narrowed in front, dilated and subbiangulated behind, pale green, wrinkled above by raised lines, which are numerous, slanting, subgranular, and diverging in various directions, adorned moreover towards the ventral edge with concentric raised wrinkles; front raised lines looking downwards and posteriorwards, extreme posterior lines finer, subradiatingly divergent, and forming near the beaks acute angles with the larger central ones; umbonal ridge not prominent yet conspicuous, lunule minute, umbonal slope broadish and concave, beaks small, scarcely slanting, nacre white; primary teeth two in each valve, compressed-pyramidal, not transverse.

LEA, Journ. Ac. N. S. Philad. ser. 2. vol. v. (Obs. on Unio, vol. x. p. 34), pl. 50. f. 304.

Hab. Bengal.

There are one or two darker rays upon the umbonal slope. The hinge-plate is peculiar. The extreme anterior liræ do not run in the same direction as the rest.

Species 413. (Mus. Hanley.)

UNIO SANDRII. *Un. testâ parvâ, vel ovato-oblongâ crassiusculâ et posticè ventricosâ, vel magis elongatâ tenui et subventricosâ, luteo-olivaceâ concolore, ad costam umbonalem haud viridi pictâ, sublævigatâ, rugis incrementi rudibus tantum subplicatâ, margine ventrali retuso, margine dorsali postico magis minusve acclivi, aream posticâ dorsali concavâ, lunulâ parvâ, satis autem conspicuâ, umbonibus eminentibus, natibus concentricè undato-plicatis, margaritâ albidâ, dentibus cardinalibus satis magnis.*

SANDRI'S UNIO. Shell small, either ovate-oblong thickish and posteriorly ventricose, or more elongated thin and less ventricose, of an uniform olivaceous yellow, not painted with green at the umbonal ridge, smoothish, merely subplicated by coarse wrinkles of increase; ventral edge indented, hinder dorsal edge more or less elevated, hinder dorsal area concave, lunule small, yet tolerably distinct, umboes prominent, beaks with concentric wavy folds, nacre whitish, cardinal teeth tolerably large.

VILLA, in Rossmässl. Icon. L. und S. Moll. pt. 12. p. 26. pl. 56. f. 748, 749.

Hab. Dalmatia.

However dissimilar in aspect, this shell runs by almost imperceptible degrees into *elongatulus* and *Requieni*. The shorter form delineated is the var. *sericata*, which is furthest removed from the allied species. The front dorsal corner in the more characteristic specimens is apt to project in an angular manner.

Species 414. (Mus. Hanley.)

UNIO BONELLII. *Un. testâ tenui, subobliquè oblongâ, sæpius subarcuatâ, valde inæquilaterali, depressâ, anticè angustâ, posticè productâ, olivaceâ, haud radiatâ, lævi, margine ventrali magis minusve retuso, costâ umbonali planulatâ, lunulâ angustâ; umbonibus haud eminentibus, plicis angustis irregularibus ad extremitates subtransversim undulatis; margaritâ albidâ, dente unico compresso in utrâque valvulâ, dentibus lateralibus nullis.*

BONELLI'S UNIO. Shell thin, somewhat obliquely oblong, usually subarcuated, very inequilateral, depressed, narrow in front, produced behind, olive-coloured, not rayed, smooth, with a more or less indented ventral margin, a flattened umbonal ridge, and a narrow lunule; umboes not prominent, somewhat transversely waved at their extremities by irregular narrow folds, nacre whitish, a single compressed tooth in each valve, no lateral teeth.

FÉRUSSAC, in Rossmässl. Icon. L. und S. Moll. pt. 2. p. 24. f. 134.
Unio depressa, Muhlfeldt.
Alasmodonta compressa, Menke.
Hab. Illyria.

A full-sized example has been figured, with the margin less incurved than usual. The valves have a tendency to become green at their hinder extremities, and the minute folds to be disposed in two series.

Species 415. (Mus. Hanley.)

Figure 415, which represents the male of *U. Troostensis* (Plate LXXVIII.), having inadvertently been numbered as though distinct, it has been thought preferable to consider that Species 415 represents one of those shells (such as the *perdix* of Plate XVIII.) which were erroneously determined in the earlier portion of this monograph, rather than create further confusion by changing the printed-off references to no less than six lithographs.

Species 416. (Mus. Hanley.)

UNIO AMŒNUS. *Un. testâ parvâ, crassiusculâ, subventricosâ, subinæquilaterali, ovali, posticè lævi et vix subbiangulatâ, nitidâ, squalidè flavâ, radiis olivaceis interruptis undique (postice autem confertius) ornatâ, anticè subrugosâ et minus pictâ; margine ventrali subretuso anticè acclivi, costâ umbonali inconspicuâ, lunulâ vix ullâ, umbonibus vix eminentibus, margaritâ squalidè albidâ, dentibus cardinalibus subtrigonis, laciniatis.*

THE DELICATE UNIO. Shell small, moderately thick, somewhat inequilateral, somewhat ventricose, oval, smooth and scarcely subbiangulated behind, of a shining impure yellow, everywhere (yet more closely behind) interruptedly rayed with olive, less painted and somewhat wrinkled in front; ventral edge slightly indented, rising in front, umbonal ridge inconspicuous, lunule undeveloped, umboes scarcely projecting, nacre dirty whitish, primary teeth jagged and subtriangular.

LEA, Trans. Amer. Phil. Soc., ser. 2. vol. viii. (Obs. on Unio, vol. iii. p. 38), pl. 10. f. 12.
Hab. Holston river, Tennessee, N. America.

Although the characters are merely negative, the species can generally be recognized.

Species 417. (Mus. Hanley.)

UNIO PROPINQUUS. *Un. testâ parvâ, solidâ, obliquè suborbiculari, valde inæquilaterali, anticè tumidâ, deinde concavitate latissimâ radiatâ, postremo vix subventricosâ, luteâ, olivaceo-viridi posticè radiatim lineatâ, plicis incrementi obtusis tantum sculptâ; margine ventrali in medio eminente, anticè repente acclivi; costâ umbonali latâ conspicuâ, umbonibus remotis, eminentibus, divergentibus, areâ dorsali posticâ angustâ, lunulâ maximâ, margaritâ albâ, margine cardinali lato; dentibus cardinalibus in utrâque valvulâ binis, magnis, trigonis, laciniatis.*

THE NEIGHBOURING UNIO. Shell small, solid, obliquely suborbicular, very inequilateral, tumid in front, then rayed by a very broad concavity, finally scarcely even subventricose, dirty yellow, with posterior radiating lines of olivaceous green, merely sculptured by the blunt folds of increase; ventral margin projecting in the middle, suddenly rising in front; umbonal ridge broad and conspicuous, umboes distant and diverging, umbonal area narrow, lunule extremely large, nacre white, hinge-margin broad; primary teeth two in each valve, large, triangular, jagged.

LEA, Journ. Ac. N. S. Philad. ser. 2. vol. v. (Obs. on Unio, vol. viii.), pl. 5. f. 212.
Hab. Alabama, N. America.

Between *perplexus* and *Rangianus*. The linear rays vary in number and closeness.

418.

419.

420.

421.

422.

423.

424.

Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

UNIO.

PLATE LXXX.

Species 418. (Mus. Hanley.)

UNIO FALLAX. *Un. testâ parvâ, tenui, ovali, subinæquilaterali, utrinque et infernè rotundatâ, magis minusve ventricosâ, flavo-olivaceâ, posticè radiis subconfertis viridibus ornatâ, lævigatâ, margine dorsali posticè vix declivi, costâ umbonali inconspicuâ, lunulâ nullâ, umbonibus paululum eminentibus, margaritâ albo-livescente, dentibus cardinalibus laminatis, laciniatis.*

THE DECEPTIVE UNIO. Shell small, thin, oval, not very inequilateral, rounded below and at each extremity, more or less ventricose, yellowish olive, posteriorly with rather crowded green rays, hinder dorsal edge scarcely sloping, umbonal ridge not manifest, no lunule, umboes slightly prominent, nacre livid white, primary teeth jagged and lamellar.

LEA, Journ. Ac. N. S. Philad. ser. 2. vol. iv. (Obs. on Unio, vol. vi. p. 79), pl. 15. f. 59.

Hab. Georgia and Tennessee, N. America.

Species 419. (Mus. Hanley.)

UNIO TRIANGULATA. *Un. testâ parvâ, tenui, subæquilaterali, tumidâ, oblongo-subquadratâ, posticè biangulatâ, nitidâ, olivaceo-fuscescente, præcipuè lævigatâ, anticè autem concentricè subplicatâ, et posticè liris obsoletis divergentibus ornatâ, margine ventrali convexiusculo, costâ umbonali angulatâ; umbonibus elevatis, margaritâ subalbidâ, dentibus cardinalibus magnis, dentibus lateralibus nullis.*

THE TRIPLE-ANGLED UNIO. Shell small, thin, subequilateral, swollen, squarish oblong, biangulated behind, glossy, brownish olive, chiefly smooth, but somewhat plicated transversely in front, and adorned behind with obsolete divergent raised wrinkles; ventral edge rather convex, umbonal ridge angulated, umboes projecting, nacre somewhat whitish, primary teeth large, no lateral ones.

LEA (*Margaritana*), Journ. Ac. N. S. Philad. ser. 2. vol. iv. pl. 32. f. 111; Obs. on Unio, vol. vii. pt. 1. p. 46. pl. 32. f. 111.

Hab. Georgia, N. America.

Of the three sets of fold-like wrinkles, those upon the upper are the larger and more curved. The ridge might almost be termed biangulated.

Species 420. (Mus. Hanley.)

UNIO JAPANENSIS. *Un. testâ haud magnâ, crassiusculâ, ovali-subquadratâ, vix subventricosâ, posticè subbiangulatâ, piceâ concolore, supernè plicis divergentibus, tuberculisque parvis subangulatim undatâ, margine ventrali convexo anticè acclivi, costâ umbonali inconspicuâ; areâ dorsali posticâ concavâ, liris obliquis supernè ornatâ; lunulâ nullâ, margaritâ albido-cærulescente, dentibus cardinalibus trigonis, sulcato-laciniatis; dentibus lateralibus rectis.*

THE JAPANESE UNIO. Shell not large, thickish, squarish oval, scarcely subventricose, subbiangulated posteriorly, of an uniform pitch-colour, somewhat angularly waved above with diverging folds and small nodules; ventral margin convex, rising behind, umbonal ridge inconspicuous, hinder dorsal area concave, and adorned above with slanting raised lines, no lunule, nacre bluish white, primary teeth triangular, jagged and grooved, lateral teeth not curved.

LEA, Proc. Ac. N. S. Philad. 1859, p. 153; Obs. on Unio, vol. vii. p. 62. pl. 36. f. 123.

Hab. Japan.

The umboes in the only good example known to me are eroded. Mr. Cuming possessed two specimens, but their condition was not satisfactory.

Species 421. (Mus. Hanley.)

UNIO BIANGULATUS. *Un. testâ crassiusculâ, subquadratâ, ovali vel oblongâ, subinæquilaterali, anticè depressâ angustâ et rotundatâ, posticè subventricosâ latâ et biangulatâ, nitidè flavo-olivaceâ, radiis magis minusve interruptis nigro-olivaceis undique ornatâ; anticè rugis concentricis subplicatâ, posticè lævigatâ, margine dorsali antico humiliore; margine ventrali in medio subrecto, posticè subacclivi; costâ umbonali planâ, subduplici, itaque ad extremitatem biangulatâ; areâ dorsali posticâ latiusculâ, umbonibus satis eminentibus, margaritâ albâ, dentibus cardinalibus magnis, pyramidalibus, dentibus lateralibus brevibus, eminentibus.*

THE TWO-ANGLED UNIO. Shell tolerably strong, squarish, oval, or oblong-oval, not very inequilateral, depressed, narrow, and rounded in front, broad sub-

ventricose and biangulated behind, of a glossy olive yellow, everywhere rayed with (more or less) interrupted rays of dusky olive, smooth behind, but with subpliciform concentric wrinkles anteriorly; front dorsal edge the lower; ventral margin straightish in front, somewhat rising behind; umbonal ridge flat, double, hence biangulated at its termination; hinder area rather broad, umboes moderately projecting, nacre white, primary teeth large and pyramidal, lateral teeth short and prominent.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. viii. (and Obs. on Unio, vol. iii. p. 35), pl. 9. f. 8.

Hab. Cany Fork river, Tennessee, N. America.

Conrad considers that this species is identical with his *pectorosus*, which latter is referred by Lea to *U. perdix*.

Species 422. (Mus. Hanley.)

UNIO STRAMINEUS. *Un. testâ ovatâ, solidiusculâ, subinæquilaterali, anticè breviore porrectâ et angustè rotundatâ, posticè latiore et magis ventricosâ, nitidè stramineâ, haud variegatâ, nisi aliquando radio (nonunquam radiis 2) viridi-cærulescente supra costam umbonalem inconspicuam, undique (anticè autem maximè) concentricè et confertim plicatâ, plicis umbonalibus undulatis; margine dorsali antico humiliore, ad extremitatem haud angulato; margine ventrali vix subretuso, anticè arcuatim acclivi; umbonibus satis eminentibus, natibus parvis, acutis, lunulâ vix ullâ, angustè lanceolatâ, margaritâ niveâ, dentibus cardinalibus binis, subtrigonis, obliquis, haud transversis.*

THE STRAW-COLOURED UNIO. Shell ovate, rather strong, not very inequilateral, shorter peculiarly projecting and narrowly rounded in front, broader and more ventricose behind, of a glossy straw-colour, not variegated, except by one or two bluish-green rays beyond the inconspicuous umbonal ridge, everywhere (especially, however, in front) ridged by concentric folds, which upon the umboes become undulated; front dorsal edge, which is much the lower one, not angulated at its extremity; ventral margin scarcely subretuse, arching upwards in front, umboes moderately prominent, beaks small and acute, nacre snow-white, primary teeth two in each valve, subtriangular, oblique, not transverse.

CONRAD, Silliman's Amer. Journ. Sc. vol. xxv. (1834), p. 339. pl. 1. f. 6 (badly).

Hab. Coosa river, Alabama.

This is not the species erroneously so termed in Plate 39. Conrad, in his 'New Freshwater Shells,' appears to have delineated it without a name in plate 7, f. 3.

Species 423. (Mus. Hanley.)

UNIO LUGUBRIS. *Un. testâ validâ, oblongo-subcylindraceâ, subventricosâ, posticè productâ et obtusè subcuneiformi, nigro-piceâ concolore, lævigatâ, margine ventrali subretuso et anticè acclivi, costâ umbonali satis conspicuâ et anticè magis minusve angulatâ, umbonibus haud eminentibus, margaritâ nitidissimâ vel rubro-subpurpureâ, vel cupreâ, dentibus cardinalibus haud magnis, subtrigonis, dentibus lateralibus prælongis, subarcuatis.*

THE MOURNFUL UNIO. Shell strong, oblong-subcylindraceous, somewhat ventricose, posteriorly produced and bluntly subcuneiform, of an uniform pitch-black, not sculptured; ventral margin somewhat indented, rising in front; umbonal ridge manifest, and more or less angular in front; umboes not prominent; nacre very brilliant, tinged with purplish-red or copper-coloured, primary teeth not large, subtrigonal, lateral teeth very long, somewhat curved.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. vi. (and Obs. on Unio, vol. ii. p. 30), pl. 9. f. 25.

Hab. Hopeton, near Darien, N. America.

Originally described by Lea from a single individual which was more elongated anteriorly than is usual.

Species 424. (Mus. Hanley.)

UNIO ELLIPSIS. *Un. testâ obliquè obovatâ, supernè solidissimâ, maximè inæquilaterali, anticè ventricosâ, posticè rotundato-angulatâ et magis depressâ, lævigatâ, flavo-olivaceâ, lineis confertis olivaceo-viridibus undique radiatâ, margine ventrali arcuato, costâ umbonali inconspicuâ, umbonibus valde eminentibus, remotis, lunulâ latâ, margaritâ albo-argentea; dentibus cardinalibus (etiamque lateralibus) permagnis.*

THE ELLIPTIC UNIO. Shell obliquely obovate, very solid above, remarkably inequilateral, ventricose in front, more depressed and rotundately angulated behind, smooth, olivaceous yellow, everywhere rayed with olive-green lines, ventral margin arched, umbonal ridge inconspicuous, umboes very prominent and distant, lunule broad; nacre silvery white; both primary and lateral teeth very large.

LEA, Trans. Amer. Ph. Soc. ser. 2. vol. iii. (Obs. on Unio, vol. i. p. 10), pl. 4. f. 4.

Hab. Ohio, N. America.

Such is the depth of the hinge-margin and the thickness of the valves at the umbonal region, that the shell, despite of its external tumidity, is absolutely shallow within. The hinder primary tooth in each valve is of remarkable thickness.

425.a.

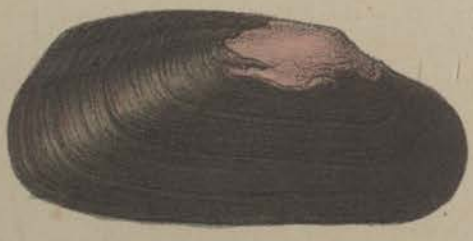
426.

427.

425.b.

428.

429.



430.

Sowerby del et lith.

Vincent Brooks Day & Son. Imp.

UNIO.

PLATE LXXXI.

Species 425. (Copied from Lea.)

UNIO HOUSTONENSIS. *Un. testâ subrotundâ, subinflatâ, æquilaterali, anticè paulisper depressâ, crassiusculâ, lævi, luteo-fuscâ, vel concolore, vel radiis obscurioribus, margaritâ albidâ; dentibus cardinalibus magnis, erectis, crenulatis; dentibus lateralibus curtis, subrectis.*

THE HOUSTON UNIO. Shell nearly round, somewhat inflated, equilateral, a little flattened at the anterior side, rather thick, smooth, yellowish-brown, either without rays or with the rays obscure; nacre white; cardinal teeth large, erect, crenulated; lateral teeth short and straight.

LEA, Proc. Ac. N. S. Philad. 1859, p. 155; Obs. on Unio, vol. viii. pt. 1. p. 40. pl. 60. f. 183.

Hab. Houston and Rutersville, Texas, N. America.

Nearly allied to *petrinus* of Gould, but its beaks and hinder slope are not corrugated, the former being simply marked by two or three folds.

Species 426. (Mus. Lea.)

UNIO SHOWALTERII. *Un. testâ subrotundâ, crassâ, sublenticulari, æquilaterali, lævi, tenebroso-fuscâ, obsoletè radiatâ; natibus eminentibus, inflatis; margaritâ albâ; dentibus cardinalibus crassis, erectis, compressis, in utrâque valvulâ duplicibus; dentibus lateralibus brevibus, percrassis, corrugatis.*

SHOWALTER'S UNIO. Shell roundish, thick, somewhat lenticular, equilateral, smooth, dusky-brown, indistinctly rayed; beaks prominent, inflated; nacre white; primary teeth thick, erect, compressed, two in each valve; lateral teeth short, wrinkled and very thick.

LEA, Proc. Ac. N. S. Philad. 1860, p. 307; Obs. on Unio, vol. viii. p. 77. pl. 8. f. 223.

Hab. Coosa river, Alabama.

Nearly allied to *circulus*, but with higher beaks; it reminds one also of *ebenus*, but has not the beaks recurved. The dark brown epidermis inclines to bottle-green, with obscure broad rays in the middle.

Species 427. (Mus. Lea.)

UNIO PUDICUS. *Un. testâ subtrigonâ, inæquilaterali, depressâ, subcrassâ, anticè rotundatâ, posticè obtusè angulatâ, nitidâ, luteo-fuscâ, radiis viridibus ornatâ, lævigatâ; natibus satis eminentibus, ad apices rugoso-undulatis; margaritâ albâ; dentibus cardinalibus crassiusculis, erectis, compressis, crenulatis; dentibus lateralibus subcurtis, crassis, subarcuatis.*

THE MODEST UNIO. Shell subtriangular, inequilateral, depressed, thickish, rounded in front, bluntly angular behind, glossy, yellowish-brown, with green rays, smooth; beaks rather prominent, rugosely undulate at the tips; nacre white; cardinal teeth rather thick, erect, compressed, and crenulate; lateral teeth rather short, thick, and somewhat curved.

LEA, Proc. Ac. N. S. Philad. 1860, p. 62; Obs. on Unio, vol. viii. pt. 1. p. 28. pl. 56. f. 171.

Hab. N. Alabama.

The rays are small and more fasciculate over the middle of the disk, the umbonal slope slightly raised into an obtuse angle, and the carinated posterior slope with few or no rays. Its outline approaches *rubiginosus*, but is not so triangular; nor is it so angulated at the umbonal slope.

Species 428. (Mus. Lea.)

UNIO TRINACRIS. *Un. testâ inæquilaterali, obliquè ovato-trigonâ, crassâ, ad umbones ventricosâ, fusco-virente, obscurè radiatâ, lævigatâ; areâ posticâ luteâ et planulatâ; costâ umbonali, conspicuâ, angulatâ; natibus eminentibus, margaritâ albidâ; margine cardinali lato; dentibus lateralibus subcurtis, percrassis, rectis, corrugatis.*

THE TRIDENT UNIO. Shell inequilateral, obliquely ovate-triangular, thick, ventricose at the umboes, brownish-green, indistinctly rayed, smooth; hinder area yellowish, and flattened; umbonal ridge angular and conspicuous; beaks prominent; hinge-margin broad; lateral teeth rather short, very thick, straight, wrinkled.

LEA, Proc. Ac. N. S. Philad. 1861. p. 59; Obs. on Unio, vol. viii. p. 90. pl. 12. f. 235.

Hab. Coosa river, Alabama.

The primary teeth appear from the drawing to be triangular, and by no means small; they are stated, however, to be rather small, depressed, and striated.

Species 429. (Mus. Lea.)

UNIO COUCHIANUS. *Un. testâ quadratâ, inflatâ, crassâ, inæquilaterali, anticè rotundâ, posticè biangulatâ, lævi, olivaceo-fuscâ, concolore, ante costam umbonalem, latam et angulatam radiatim excavatâ, pone eam planulatâ et conspicuè obliquè sulcatâ; margine ventrali anticè arcuato, posticè emarginato; natibus eminentibus, lunulâ conspicuâ, margaritâ albidâ; dentibus cardinalibus subgrandibus, erectis, rugoso-striatis, crenulatis; dentibus lateralibus sublongis, crassis, subarcuatis.*

COUCH'S UNIO. Shell squarish, inflated, thick, inequilateral, rounded in front, biangulated behind, smooth, of an uniform olive-brown, with a ray-like hollow before the broad and angular umbonal ridge, flattened and with conspicuous slanting grooves behind it; ventral edge arched in front, emarginated behind; nacre whitish; primary teeth rather large, erect, rugosely striated, crenulated; lateral teeth somewhat long, thick, rather curved.

LEA, Proc. Ac. N. S. Philad. 1860, p. 305; Obs. on Unio, vol. viii. p. 53. pl. 66. f. 196.

Hab. Rio Salado, New Leon, Mexico.

The contrast between the coarse fold-like appearance of the broad flat posterior dorsal slope and the general smoothness is very striking.

Species 430. (Copied from Lea.)

UNIO POPEI. *Un. testâ elongatâ, subtenui, depresso-cylindraceâ, infernè rètusâ, anticè angustâ et porrectâ, posticè productâ et subtruncato-biangulatâ, fuscâ aut olivaceâ, obsoletè radiatâ, lævigatâ; natibus parvis, prominulis, ad apices granulatis, margaritâ albâ; nonnunquam pallidè aurantio-rubrâ; dentibus cardinalibus compressis, erectis, acuminatis, crenulatis; dentibus lateralibus prælongis, lamellatis, subrectis.*

POPE'S UNIO. Shell elongated, depressed-cylindraceous, indented ventrally, narrow and projecting in front, produced and subtruncately biangulated behind, brown or olive, with indistinct rays, smooth; beaks small, rather prominent, granulated at the tips; nacre white, sometimes salmon-coloured; primary teeth compressed, erect, acuminate, crenulated; lateral teeth very long, lamellar, nearly straight.

LEA, Obs. on Unio, vol. viii. (Journ. Ac. N. S. Philad. ser. 2. vol. iv.), p. 54. pl. 66. f. 197.

Hab. Texas, and New Leon in Mexico.

Lea remarks that the posterior slope is raised into a carina, and is rayed with two impressed lines.

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Sowerby del. et lith.

Vincent Brooks, Day & Son, Imp.

UNIO.

PLATE LXXXII.

Species 431. (Mus. Lea.)

UNIO HIGGINSII. *Un. testâ magnâ, tumidâ, percrassâ, valde inæquilaterali, subobliquè ovali, anticè angustatâ, posticè rotundatâ, lævi, politâ, olivaceo-virente, multiradiatâ, margine ventrali convexo, costâ umbonali rotundatâ; aream posticâ magnâ, cordatâ, subplanulatâ; umbonibus valde eminentibus, tumidis, incurvatis; lunulâ parvâ, distinctâ; margaritâ albâ, aut pallidè aurantio-rubrâ; margine cardinali lato; dentibus cardinalibus magnis, crassis, erectis, crenulatis; dentibus lateralibus percrassis, subrectis.*

HIGGINS'S UNIO. Shell large, swollen, very thick, very inequilateral, somewhat obliquely oval, narrowed in front, rounded behind, smooth, polished, greenish olive with many rays; ventral margin convex, umbonal ridge rounded; hinder area large, cordate, somewhat flattened; umboes very prominent, swollen, incurved; lunule small, distinct; nacre white or salmon-coloured; hinge-margin broad; primary teeth large, thick, erect, crenulated; lateral teeth very thick, straightish.

LEA, Proc. Ac. N. S. Philad. 1860; Obs. on Unio, vol. ix. p. 10. pl. 24. f. 258.

Hab. Muscatine, Iowa, N. America.

Reminds one of *ligamentinus*, but is less elliptical; of *ellipsis*, but is more polished and fuller of greenish rays; of *orbiculatus*, but is more inflated, has more rays, and a greener epidermis. There are three indistinct raised lines running along the hinder area.

Species 432. (Mus. Lea.)

UNIO DECUMBENS. *Un. testâ inæquilaterali, tenui, elongato-oblongâ, arcuatâ, depressâ, anticè angustatâ, posticè biangulatâ, fusco-subrufescente, obsoletè subradiatâ, lævi; margine ligamentali curvato, elevato, margine ventrali latissimè retuso; costâ umbonali humili, obtusè angulatâ; aream posticâ angustâ; umbonibus prominulis; margaritâ subpurpureâ; dentibus cardinalibus parvis subtransversis; dentibus lateralibus arcuatis.*

THE LYING-DOWN UNIO. Shell inequilateral, thin, elongated-oblong, arched, depressed, narrowed in front, biangulated behind, of a somewhat red dark brown, with indistinct rays, smooth; ligament margin curved and raised, ventral margin very broadly indented: umbonal ridge low, bluntly angulated; hinder area narrow, umboes slightly raised, nacre purplish, primary teeth small and somewhat transverse, lateral teeth arched.

LEA, Proc. Ac. N. S. Philad. 1861, p. 40; Obs. on Unio, vol. viii. p. 91. pl. 12. f. 236.

Hab. Alabama, N. America.

Reminds one, says Lea, of *percoarctatus*, but differs in shape and dentition, the primary teeth in the latter being nearly perpendicular to the basal margin. The lateral teeth are stated to be much elongated.

Species 433. (Mus. Lea.)

UNIO ALABAMENSIS. *Un. testâ oblongâ, ventricosâ, crassiusculâ, subinæquilaterali, posticè obtusè biangulatâ, olivaceo-lutescente concolore, nitidâ, lævigatâ, margine ventrali anticè acclivi; natibus prominulis, ad apices rugoso-undulatis; costâ umbonali inflatâ, rotundatâ; margaritâ albidâ, supernè pallidè aurantio-rubrâ; dentibus cardinalibus parvis, suberectis; dentibus lateralibus nullis.*

THE ALABAMA UNIO. Shell oblong, ventricose, thickish, not so very inequilateral, bluntly biangulated behind, of a uniform glossy yellowish olive, smooth; ventral edge rising in front; beaks a little projecting, rugosely undulated at the tips; umbonal ridge inflated, rounded; nacre whitish, salmon-coloured above; primary teeth small, somewhat erect; no lateral ones.

LEA (*Margaritana*), Proc. Ac. N. S. Philad. 1861, p. 41; Obs. on Unio, vol. viii. p. 108. pl. 16. f. 249.

Hab. Talladega Creek, Alabama.

Allied, says Lea, who drew up his description from a single specimen, to *Spillmannii*, but differs in colour, is less inflated, and rather more oblique; its undulations are, also, more concentric.

Species 434. (Mus. Lea.)

UNIO WARDII. *Un. testâ* U. metanevero *simillimâ, sed*

magis depressâ et costâ umbonali tuberculorum experte.

WARD'S UNIO. Shell extremely like *U. metanever*, but more depressed, and with its umbonal ridge devoid of (the characteristic) tubercles.

LEA, Proc. Ac. N. S. Philad. 1861, p. 392; Obs. on Unio, vol. ix. p. 9. pl. 24. f. 257.

Hab. Ohio, Iowa, and Virginia, N. America.

A somewhat doubtful species, but worth figuring, from its great dissimilarity to the ordinary examples of *metanever*.

Species 435. (Mus. Lea.)

UNIO SPILLMANNII. *Un. testâ magnâ, subæquilaterali, subcrassâ, inflatâ, oblongâ, anticè porrectâ et angustè rotundatâ, posticè subbiangulatâ, nitidâ, lævigatâ, fusco-rufescente, vel fusco-nigrescente, obsoletè radiatâ, margine ventrali haud retuso; costâ umbonali rotundatâ, eminente; lunulâ vel angustâ, vel nullâ, umbonibus eminentibus, ad apices rugoso-undulatis; margaritâ albâ; dentibus cardinalibus parvis, tuberculato-compressis, in utrâque valvulâ singulis; dentibus lateralibus nullis.*

SPILLMAN'S UNIO. Shell large, subequilateral, thickish, swollen, oblong, projecting and narrowly rounded in front, almost biangular behind, smooth, shining, from reddish to very dark brown, obscurely rayed, not indented at the ventral margin; umbonal ridge rounded and prominent; lunule, if any, narrow; umboes projecting, rugosely undulated at the tips; nacre white; primary teeth small, compressed-tubercular, one in each valve; no lateral teeth.

LEA (*Margaritana*), Proc. Ac. N. S. Philad. 1858, p. 138; Obs. on Unio, vol. viii. p. 109. pl. 17. f. 252.

Hab. Tombighee river, Mississippi.

The hinder slope has two raised lines running from the beaks.

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Sowerby, del et. lith.

Vincent Brooks, Day & Son, Imp.

UNIO.

PLATE LXXXIII.

Species 436. (Mus. Lea.)

UNIO CINNAMOMINUS. *Un. testâ parvâ, subventricosâ, crassâ, inæquilaterali, ovali, posticè subbiangulatâ, lævi cinnamomeâ concolore, margine ventrali convexo, costâ umbonali inconspicuâ, umbonibus prominulis, lunulâ nullâ; margaritâ albidâ; dentibus cardinalibus erectis, crenulatis, dentibus lateralibus curtis, subrectis.*

THE CINNAMON UNIO. Shell small, somewhat ventricose, thick, inequilateral, oval, subbiangulated behind, smooth, of a uniform cinnamon-colour; ventral margin convex; umbonal ridge not conspicuous; umboes rather prominent; no lunule; nacre whitish; primary teeth erect, crenulated; lateral teeth short, nearly straight.

LEA, Proc. Ac. N. S. Philad. 1861, p. 39; Obs. on Unio, vol. viii. p. 104. pl. 16. f. 248.

Hab. Tombighee river, Mississippi.

Allied to *nux* and *Brumbyanus* in outline, but distinguished by the peculiar tint of its epidermis.

Species 437. (Mus. Smithsonian Institution.)

UNIO MACRODON. *Un. testâ depressâ, crassiusculâ, subæquilaterali, ovali-elongatâ, anticè porrectâ et rotundatâ, posticè subattenuatâ et subangulatâ, sublævigatâ, luteâ, margine ventrali arcuato, costâ umbonali subangulatâ et inconspicuâ, lunulâ nullâ, areâ posticâ angustâ; umbonibus satis eminentibus, ad apices minutè granulatis; margaritâ albidâ; dentibus cardinalibus magnis, erectis, crenulatis.*

THE BIG-TOOTHED UNIO. Shell depressed, thickish, nearly equilateral, elongated-oval, projecting and rounded in front, somewhat tapering and subangular behind, smoothish, dirty yellow; ventral edge arched; umbonal ridge somewhat angular, not conspicuous; no lunule, hinder slope narrow, umboes moderately prominent and minutely grained at their extremities, nacre whitish; primary teeth big, erect, crenulated.

LEA, Proc. Ac. N. S. Philad. 1859, p. 154; Obs. on Unio, vol. ix. p. 15. pl. 26. f. 262.

Hab. Rutersville, Texas.

Described by Lea (who remarks that there may possibly be rays in better examples) from two odd valves, the *Tellinoid* shape of which renders them very peculiar.

Species 438. (Mus. Newcomb.)

UNIO AUREUS. *Un. testâ parvâ, subinæquilaterali, subquadratâ, crassiusculâ, subdepressâ, aureâ, lævigatâ; costâ umbonali vix prominulâ, rotundatâ; lunulâ angustâ, umbonibus satis eminentibus, margaritâ albâ; dentibus cardinalibus erectis, striatis; dentibus lateralibus brevibus, obliquis.*

THE GOLDEN UNIO. Shell small, somewhat inequilateral, squarish, thickish, somewhat depressed, golden-yellow, smooth; umbonal ridge scarcely raised, rounded; lunule narrow, umboes tolerably prominent, nacre white, primary teeth erect and striated, lateral teeth smooth and slanting.

LEA, Proc. Ac. N. S. Philad. 1859, p. 112; Obs. on Unio, vol. ix. p. 17. pl. 26. f. 264.

Hab. Texas.

Allied to *rubiginosus* and *petrinus*. It has a few small indistinct rays, and rather distant marks of growth.

Species 439. (Mus. Smithsonian Institution.)

UNIO NODULOSUS. *Un. testâ valde obliquâ, persolidâ, magis minusve ventricosâ, maximè inæquilaterali, anticè truncatâ, fuscâ, tuberculis pergrandibus et posticè plicis paucis latissimis ornatâ, umbonibus eminentibus, terminalibus, margaritâ albâ; margine cardinali latissimo, dentibus cardinalibus in utrâque valvulâ duplicibus, sæpius rudè sulcatis, haud transversis; dentibus lateralibus longis.*

THE NODULOUS UNIO. Shell very oblique, very solid, more or less ventricose, remarkably inequilateral, truncated in front, dark brown; surface adorned with very large tubercles, and on the hinder slope with a few very broad folds, umboes prominent and terminal, nacre white, hinge-margin excessively broad; primary teeth two in each valve, usually coarsely grooved, not transverse; lateral teeth elongated.

WOOD (*Mya*), General Conch. p. 106. pl. 22. f. 1 to 4. *Unio grandidens*, Lea, Obs. on Unio, vol. ix. p. 27. pl. 30. f. 274.

Hab. Hot springs, Arkansas, N. America (teste Lea).

The aspect is more that of a Chinese than a N. American *Unio*. Lea considers his own species distinct from Wood's; both may prove to be the *Chama plumbea* of Chemnitz (Conch. Cab. vol. xi. f. 1991, 1992). The *U. nodulosus* of Plate IX. is merely the *Leeai* of Gray (Griffith's ed. Cuvier, Mol. pl. 21. f. 1.), a comparatively common shell.

Species 440. (Mus. Lea.)

UNIO CONCOLOR. *Un. testâ subelliptică, inæquilaterali, crassiusculâ, subventricosâ, olivaceo-nigrescente concolore, lævigatâ; costâ umbonali vix prominulâ, obtusissimè angulatâ; margaritâ albâ; dentibus cardinalibus crassiusculis, erectis, obtusè compressis; dentibus lateralibus sublongis, obliquis, subrectis.*

THE ONE-TINTED UNIO. Shell somewhat elliptic, inequilateral, thickish, somewhat ventricose, of a uniform dusky olive-colour, smooth; umbonal ridge scarcely projecting, very bluntly angular; nacre white; primary teeth thickish, erect, obtusely compressed; lateral teeth somewhat long, oblique, nearly straight.

LEA, Proc. Ac. N. S. Philad. 1861, p. 40; Obs. on Unio, vol. viii. p. 93. pl. 12. f. 237.

Hab. Big Prairie Creek, Alabama.

Lea remarks that this shell, usually taken for the *perovatus* of Conrad, has the outline, but not the colour, of *Brumbyanus*, and reminds one also of *nux*, but is larger, and has the beaks less raised, and more terminal.

Species 441. (Mus. Lea.)

UNIO HEERMANNI. *Un. testâ subtenui, depressâ, inæquilaterali, ovali-subquadratâ, posticè subbiangulatâ, nitidâ, fusco-lutescente concolore, lævi; costâ umbonali prominulâ, rotundatâ, infernè latâ; margine ligamentali acclivi, lunulâ aut nullâ aut angustissimâ; margaritâ nitidissimâ, purpurascente, superne, autem, palidè aurantio-rubrâ; dentibus cardinalibus subconicis, crenulatis.*

HEERMAN'S UNIO. Shell thinnish, depressed, inequilateral, squarish oval, somewhat biangulated behind, of a uniform glossy yellowish-brown, smooth; umbonal ridge rounded, little projecting, broad at its termination; ligamental edge rising, lunule either none or very narrow, nacre of a very brilliant purplish hue, yet salmon-coloured in the umbonal cavity; primary teeth somewhat conical, crenulated.

LEA, Proc. Ac. N. S. Philad. 1861, p. 392; Obs. on Unio, vol. ix. p. 16. pl. 26. f. 263.

Hab. Medina river, Texas.

Species 442. (Mus. Forshey.)

UNIO RIDDELLII. *Un. testâ parvâ, solidâ, inflatâ, rotundato-subquadratâ, valde inæquilaterali, fusco-olivaceâ, obscurè radiatâ, lævi; margine ventrali arcuato, costâ umbonali angulatâ et conspicuâ, lunulâ nullâ, umbonibus valde eminentibus; natibus minutè et confertim plicatis, margaritâ albâ, dentibus cardinalibus subpyramidalibus, dentibus lateralibus latis, corrugatis.*

RIDDELL'S UNIO. Shell small, solid, inflated, squarish-rounded, very inequilateral, olive-brown, indistinctly rayed, smooth; ventral edge arched, umbonal ridge conspicuous and angular, no lunule, umboes very prominent, beaks with minute and crowded folds, nacre white, primary teeth subpyramidal, lateral teeth broad and wrinkled.

LEA, Proc. Ac. N. S. Philad. 1861, p. 392; Obs. on Unio, vol. ix. p. 20. pl. 27. f. 267.

Hab. Dallas in Texas.

Described from a single, but perfect example.

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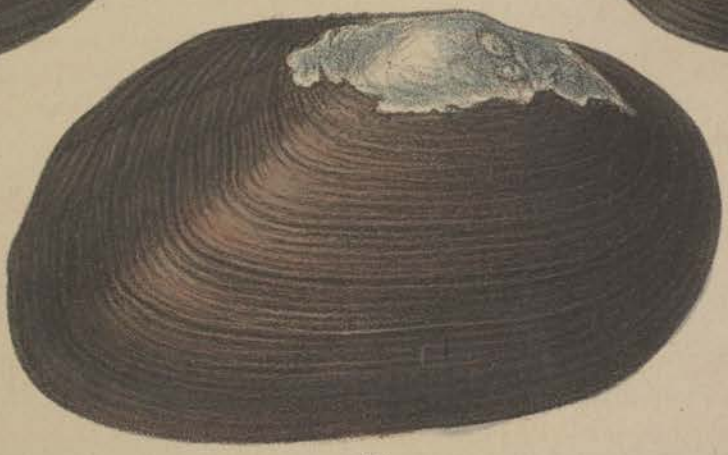

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Sowerby. del. et lith.

Vincent Brooks Day & Son. Imp.

UNIO.

PLATE LXXXIV.

Species 443. (Mus. Lea.)

UNIO PERÆFORMIS. *Un. testâ crassiusculâ, satis ventricosâ, subinæquilaterali, obliquè obovatâ, sublævigatâ, viridi-nigrescente, haud radiatâ; margine ligamentali acclivi; costâ umbonali subrotundatâ obtusè subangulatâ, margaritâ albâ; dentibus cardinalibus haud magnis, compressis, crenulatis.*

THE POUCH-SHAPED UNIO. Shell thickish, moderately ventricose, somewhat inequilateral, obliquely obovate, smoothish, dusky green, not rayed; ligamental edge rising; umbonal ridge roundish, bluntly subangulated; nacre white; primary teeth not large, compressed, crenulated.

LEA, Obs. on Unio, vol. x. p. 20. pl. 43. f. 292.

Hab. Uruguay.

There are imperfect irregular undulations along the angle of the hinder slope; these, however, may not be persistent.

Species 444. (From Lea.)

UNIO GRATUS. *Un. testâ crassiusculâ, subventricosâ, inæquilaterali, posticè dilatatâ, saturatius olivaceo-fuscâ, sublævigatâ; margine ventrali convexo; margine ligamentali acclivi; costâ umbonali subinflatâ et rotundatâ; lunulâ vix ullâ; natibus plicis brevibus radiatis; margaritâ albâ; dentibus cardinalibus subtransversis; dentibus lateralibus elongatis.*

THE AGREEABLE UNIO. Shell thickish, subventricose, inequilateral, dilated behind, very dark olive-brown, smoothish; ventral margin convex; ligamental edge rising; umbonal ridge somewhat swollen and rounded; scarcely any lunule; beaks rayed with short folds; nacre white; primary teeth somewhat transverse; lateral teeth elongated.

LEA, Obs. on Unio, vol. x. p. 18. pl. 43. f. 290.

Hab. Uruguay, S. America.

Species 445. (Copied from Lea.)

UNIO PIGER. *Un. testâ subtenui, ventricosâ, subinæquilaterali, obovatâ, posticè latâ et subbiangulatâ, fusco-nigrescente, obsoletè subradiatâ, lævigatâ; costâ umbonali rotundatâ, eminente; areâ posticâ latâ, obscurè sulcatâ; lunulâ angustâ; margaritâ albâ; dentibus cardinalibus compressis, lamellaribus, crenulatis; dentibus lateralibus longis et posticè curvatis.*

THE FAT UNIO. Shell thinnish, ventricose, somewhat inequilateral, obovate, broad and subbiangular behind, dusky brown, at most indistinctly rayed, smooth; umbonal ridge raised and rounded; hinder slope broad and obscurely grooved, lunule narrow, nacre white; primary teeth compressed, lamellar, crenulated; lateral teeth long, curved at the end.

LEA, Obs. on Unio, vol. x. p. 23. pl. 27. f. 296?

Hab. Uruguay.

Allied to *Uruguayensis*, but smaller, rather rounder and with a darker and less shining epidermis. There are vestiges of divergently radiating folds on the eroded umboes.

Species 446. (Copied from Lea.)

UNIO GESNERII. *Un. testâ subæquilaterali, crassiusculâ, inflatâ, ovali-subquadratâ, posticè biangulatâ, nitidâ, concentricè sulcatâ, fusco-nigrescente, obscurè radiatâ; costâ umbonali conspicuâ, obtusè angulatâ; lunulâ inconspicuâ; margaritâ albâ, sæpius margine subpurpureo; dentibus cardinalibus parvis, subtransversis, subcompressis, in utrâque valvulâ singulis; dentibus lateralibus nullis.*

GESNER'S UNIO. Shell nearly equilateral, thickish, swollen, squarish-oval, biangulated behind, glossy, concentrically grooved, blackish-brown, indistinctly rayed; umbonal ridge conspicuous, bluntly angular; lunule scarcely evident; nacre white, usually bordered with purplish; primary teeth small, somewhat transverse, somewhat compressed, one only in each valve; no lateral teeth.

LEA (*Margaritana*), Proc. Ac. N.S. Philad. 1858, p. 138; Obs. on Unio, vol. ix. p. 33. pl. 32. f. 280.

Hab. Alabama and Georgia, N. America.

Species 447. (Mus. Lea.)

UNIO SPECIOSUS. *Un. testâ depressâ, crassiusculâ, subquadrato-obovali, subæquilaterali, posticè biangulatâ, undique tuberculis minutis subgranulatâ (granis supra costam umbonalem obtusè angulatum sublineari-*

bus, et in seriebus curvatis confertim ordinatis) luteo-virescente, aut concolore, aut obscurè radiatâ; margine ventrali retuso, lunulâ aut nullâ, aut perparvâ, margaritâ albâ, dentibus cardinalibus subtrigonis, striatis; dentibus lateralibus rectis.

THE SEEMLY UNIO. Shell depressed, thickish, squarish oboval, nearly equilateral, biangulated behind, everywhere subgranulated by minute tubercles (which, beyond the bluntly angular umbonal ridge, become linear, and are disposed in curved and crowded parallel rows), greenish-yellow, at most indistinctly rayed; ventral edge indented, lunule either minute or none, nacre white, primary teeth subtriangular, striated; lateral teeth straight.

LEA, Proc. Ac. N. S. Philad. 1862, p. 168; Obs. on Unio, vol. ix. p. 29. pl. 31. f. 276.

Hab. Texas.

Very like *Forsheyi*, but with much smaller tubercles, and more depressed and quadrate form. The sculpture reminds one of Say's *apiculatus*.

Species 448. (Copied from Lea.)

UNIO URUGUAYENSIS. *Un. testâ crassiusculâ, inflatâ, obovali, posticè biangulatâ, subæquilaterali, politâ, utrinque concentricè subsulcatâ, in medio lævi, viridi-fuscâ, obsoletè subradiatâ; margine ventrali subarcuato anticè acclivi; costâ umbonali eminente rotundatâ, lunulâ perparvâ, areâ posticâ latâ, natibus costis divergentibus ornatis; margaritâ albâ, dentibus cardinalibus crenatis et sublamellaribus, dentibus lateralibus striatis et subrectis.*

THE URUGUAY UNIO. Shell thickish, inflated, oboval, biangular behind, subequilateral, polished, concentrically subsulcated at each end, smooth in the middle, greenish-brown, with very indistinct rays; ventral edge somewhat arched, rising in front; umbonal ridge prominent and rounded, lunule very small, hinder area broad, beaks adorned with divergent ribs, nacre white, primary teeth crenulated and somewhat lamellar, lateral teeth striated and straightish.

LEA, Obs. on Unio, vol. x. p. 24. pl. 45. f. 298.

Hab. Uruguay.

Near *delodontus*, but not so wide, and has a smooth and darker epidermis; it is more ventricose and more elliptical than *Wymanii*. The colour is darkest posteriorly.

Species 449. (Mus. Lea.)

UNIO WYMANII. *Un. testâ inæquilaterali, obovali-subquadratâ, posticè latè biangulatâ, depressâ (et anticè maximè), crassiusculâ, concentricè subsulcatâ (anticè præsertim), olivaceo-nigrescente, vel concolore, vel obscurè radiatâ, margine ventrali convexo; costâ umbonali prominulâ, rotundatâ; natibus parvis, plicis brevibus subdivergentibus, radiatis, lunulâ inconspicuâ, margaritâ albâ; dentibus cardinalibus angustè subtrigonis, crenulatis; dentibus lateralibus longis, crenulatis.*

WYMAN'S UNIO. Shell inequilateral, squarish oboval, broadly biangular behind, depressed (especially in front), tolerably thick, concentrically subsulcated (particularly in front), blackish-olive, at most indistinctly rayed; ventral margin convex, umbonal ridge rather prominent and rounded; beaks with small divergently radiating ridges; lunule not evident, nacre white; primary teeth narrowly subtriangular, crenulated; lateral teeth long and crenulated.

LEA, Obs. on Unio, vol. x. p. 17. pl. 42. f. 289.

Hab. Uruguay.

The shape is peculiar when combined with the radiating folds.

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Sowerby del. et lith.

Vincent Brooks, Day & Son, Imp.

lamellaribus, transversis, cristatis, in valvulâ sinistrâ ad basim conjunctis.

THE TRUNCATED UNIO. Shell thick, tumid, somewhat concave before the middle, elongated, somewhat wedge-shaped, peculiarly inequilateral, broader in front, somewhat tapering behind, sinuous ventrally, glossy, dirty yellow, or yellow-olive with a few fuscous zones of increase, not rayed, nearly smooth; no umbonal ridge, umboes tumid and very prominent, lunule deep, beaks incurved, nacre silvery white, primary teeth lamellar, transverse, crested, united at their base in the left valve.

SWAINS, Zool. Illust. ser. 2, Unio, pl. 1.

Hab. River Tigris, near Bagdad.

The beaks are apparently simple.

Species 454. (Mus. Hanley.)

UNIO ARCTIOR. *Un. testâ obliquè elongato-oblongâ, crassâ, depressâ, anticè brevi et angustè porrectâ, posticè attenuatim subbiangulatâ, lutescente et olivaceo-viridi obscurè radiatâ, concentricè substriatâ, margine ventrali convexo anticè acclivi, costâ umbonali subinconspicuâ, lunulâ impressâ, natibus acutis porcis crassis 2–3 subconcentricè instructis, margaritâ subpurpureâ, dentibus cardinalibus laciniatis, subtrigonis.*

THE MUCH-PINCHED UNIO. Shell obliquely elongated-oblong, thick, depressed, short and narrowly projecting in front, taperingly subbiangular behind, obscurely rayed with olivaceous green and dirty yellow, concentrically substriated; ventral edge convex and anteriorly sloping upwards, umbonal ridge rather inconspicuous, lunule impressed, beaks furnished with 2–3 almost concentric coarse ridges, nacre purplish, primary teeth jagged and triangular.

LEA, Trans. Amer. Phil. Soc. vol. vi. (Obs. on Unio, vol. ii. p. 10), pl. 4. f. 10.

Hab. Ohio, near Cincinnati, N. America.

Very near *gibbosus*, yet of a different shape.

Species 455. (Mus. Hanley.)

UNIO MULTISTRIATUS. *Un. testâ parvâ, compressâ, subtenui, oblongâ, anticè brevi, posticè subbiangulatâ, olivaceâ concolore (ferrugine sæpius occultatâ) rugis confertis elevatis undique sculptâ; rugis anticè et infernè subconcentricè ordinatis, umbones versus autem zicza-formibus et pone costam umbonalem inconspicuam angulatim divergentibus; margine ventrali subretuso, margaritâ albo-cærulescente, nitidissimâ, supernè olivaceâ, dentibus cardinalibus sublamellatis.*

THE MANY-STRIATED UNIO. Shell small, compressed, thinnish, oblong, short in front, subbiangulated behind, of a uniform olive (usually concealed by rust), everywhere sculptured by raised and crowded wrinkles, which are almost concentric in front and near the base, are broken into zicza-cs near the umboes, and angulately divergent behind the obscure umbonal ridge; ventral edge somewhat indented, nacre of a brilliant bluish-white, but olivaceous above, primary teeth sublamellar.

LEA, Obs. on Unio (Trans. Amer. Phil. Soc. vol. iv.), vol. i. p. 101. pl. 12. f. 22.

Hab. Brazil.

Now regarded by Lea as identical with the *ellipticus* of Spix, but if so, the shell (a very rare one in England) merits to be figured from its very remarkable sculpture.

Species 456. (Mus. Hanley.)

UNIO SUBOVATUS. *Un. testâ crassiusculâ, ventricosâ, ovato-subtrigonâ, subinæquilaterali, anticè rotundato-attenuatâ, posticè dilatatâ, infernè arcuatâ et anticè acclivi, sublævigatâ, luteâ, radiis permultis obscurè viridibus undique ornatâ; costâ umbonali vix angulatâ, areâ posticâ dorsali latâ concaviusculâ, ligamento brevi et magno, umbonibus eminentibus, margaritâ albâ; dentibus cardinalibus in utrâque valvulâ binis, angustè trigonis, erectis; lamellis lateralibus altis.*

THE SUBOVATE UNIO. Shell thickish, ventricose, subtriangularly ovate, somewhat inequilateral, rotundately tapering in front, dilated behind, below arched and rising in front, smoothish, everywhere adorned with very many dusky green rays on a dirty yellow ground; umbonal ridge not angular, hinder dorsal area broad and somewhat concave, umboes prominent, nacre white; primary teeth two in each valve, narrowly triangular, erect; lateral lamellæ high.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. iv. (Obs. on Unio, vol. i.), p. 128. pl. 18. f. 46.

Hab. Ohio.

The beaks are stated to be undulated. This shell, which closely approaches both *occidens* and *ovatus*, is not the *subovatus* of Plate XXXI., which is the true *ventricosus* of Barnes.

UNIO.

PLATE LXXXV.

Species 450. (Mus. Hanley.)

UNIO ASPERATUS. *Un. testâ solidâ, in medio ventricosâ, utrinque depressâ, valde inæquilaterali, anticè truncatâ, posticè latè rotundato-subbiangulatâ, luteâ concolore, verrucis magnis depressis undique (nisi anticè et nates versus) ornatâ, concavitate radiante nullâ instructâ, verrucis posticis minoribus et in seriebus confertis curvatis ordinatis; costâ umbonali nullâ; umbonibus obliquis, eminentibus, lunulâ conspicuâ, margaritâ albâ, margine cardinali latissimo, dentibus cardinalibus permagnis, trigonis; dentibus lateralibus percrassis.*

THE ROUGHED UNIO. Shell solid, ventricose in the middle, depressed on either side, very inequilateral, truncated in front, broadly rotundately subbiangular behind, of a uniform dirty yellow, adorned except in front with big, flattened, wart-like tubercles, devoid of any radiating concavity, the posterior warts smaller and arranged in curved and crowded rows; no umbonal ridge; umboes oblique and projecting, lunule conspicuous, nacre white, hinge-margin very broad, primary teeth very big and triangular, lateral teeth extremely thick.

LEA, Journ. Ac. N. S. Philad. vol. v. (and Obs. on Unio, vol. viii.), pl. 7. f. 218.

Hab. Alabama river, N. America.

The ridges of growth are so arranged as to appear pliciform.

Species 451. (Mus. Hanley.)

UNIO ELONGATULUS. *Un. testâ parvâ, tenuiusculâ, subventricosâ, oblongo-elongatâ, modicè inæquilaterali, anticè porrectâ et angustè rotundatâ, luteo-olivaceâ, haud radiatâ, sed ad costam umbonalem inconspicuam viridi magis minusve fucatâ, lævigatâ; margine ventrali subretuso, anticè arcuatim acclivi; margine dorsali postico paululum acclivi, umbonibus satis eminentibus, natibus plicis paucis rudibus concentricè undatis, lunulâ nullâ; margaritâ albidâ, pallidè rubro sæpius tinctâ, dentibus cardinalibus magnis, cristatis.*

THE LITTLE ELONGATED UNIO. Shell small, thinnish, subventricose, elongated-oblong, moderately inequilateral, projecting and narrowly rounded in front, olivaceous-yellow, not rayed, but more or less stained with green at the inconspicuous umbonal ridge, smooth; ventral edge somewhat indented, rising in a curve anteriorly; hinder dorsal edge very slightly elevated; umboes moderately projecting, beaks with a few coarse concentric undulations; no lunule; nacre whitish, usually with a pale red stain; primary teeth big, crested.

VON MÜHLFELD in Rossmässl. Icon. L. und S. Moll. pt. 2. p. 23. f. 132, and pt. 12. p. 27. pl. 56. f. 751.

Hab. Dalmatia and Laybach.

Although distinct from *pictorum*, to which it has been referred by certain writers, the species comes somewhat too close to *Requieni* to be accepted without demur.

Species 452. (Mus. Hanley.)

UNIO GLABER. *Un. testâ parvâ, subtenui, depressâ, oblongâ, inæquilaterali, luteâ, anticè concentricè rugosâ, posticè lævi et radiis angustis viridibus ornatâ, margine ventrali retuso, costâ umbonali inconspicuâ, lunulâ impressâ, umbonibus plicis rudibus subconcentricè undatis, margaritâ albo-cærulescente, dentibus cardinalibus pyramidalibus, laciniatis.*

THE SMOOTH UNIO. Shell small, thinnish, depressed, oblong, inequilateral, dirty yellow, concentrically wrinkled in front, smooth and adorned with narrow green rays posteriorly; umbonal ridge inconspicuous, lunule impressed, umboes subconcentrically waved with coarse folds, nacre bluish-white, primary teeth pyramidal and jagged.

LEA, Trans. Amer. Phil. Soc. vol. vi. (Obs. on Unio, vol. ii. p. 34), pl. 10. f. 29.

Hab. Tennessee, N. America.

Species 453. (Mus. Taylor.)

UNIO TRUNCATUS. *Un. testâ crassâ, tumidâ, ante medium subconcavâ, elongatâ, subcuneiformi, maximè inæquilaterali, anticè latiore, posticè attenuatâ, infernè sinuatâ, nitidâ, luteâ, nonnunquam luteo-olivaceâ, zonis incrementi fuscis paucis ornatâ, haud radiatâ, sublævigatâ; costâ umbonali nullâ, umbonibus tumidis et valde eminentibus, lunulâ profundâ, natibus incurvis, margaritâ albo-argenteâ, dentibus cardinalibus*

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Sowerby, del. et lith

Vincent, Brooks, Day & Son, Imp

UNIO.

PLATE LXXXVI.

Species 457. (Mus. Hanley.)

UNIO PELLIS-LACERTI. *Un. testâ parvâ, crassâ, ventricosâ, oblongâ vel elongato-oblongâ, inæquilaterali, posticè angulatâ, sæpius infernè retusâ, luteo-olivaceâ, plicis olivaceo-virentibus angulatim divergentibus undique munitâ; plicis ante costam umbonalem angulatam remotioribus et majoribus, margaritâ albo-argenteâ; dentibus cardinalibus rudè laciniatis, in utrâque valvulâ 2, dente centrali magno subtrigono; lamellis lateralibus productis, curvatis, posticè valde obliquè granoso-sulcatis.*

THE LIZARD'S-SKIN UNIO. Shell small, thick, ventricose, oblong, or elongated-oblong, inequilateral, posteriorly angular, usually retuse at the lower edge, yellowish olive, everywhere strengthened with dark green olive angularly divergent folds, which are larger and more distant before the angulated umbonal ridge; nacre silvery white; two coarsely jagged primary teeth in each valve, the central one large and subtriangular; lateral lamellæ produced, curved, very obliquely granosely sulcated posteriorly.

MORELET, Journ. Conch. 1865. p. 22.

U. crispatus? Gould.

U. scobinatus? Lea.

Hab. Siam.

The description of Morelet alone suits this appositely named shell; yet it is probable that both the American writers intended to indicate it. The hinge is variable (sometimes crested), and peculiar.

Species 458. (Mus. Hanley.)

UNIO RETICULATUS. *Un. testâ tumidâ, crassâ, inæquilaterali, obovato-quadratâ, posticè subbiangulatâ, olivaceo-brunneâ concolore, lævigatâ; margine ventrali convexo et anticè acclivi; costâ umbonali rotundatâ satisque conspicuâ, ligamento perangusto vixque prominulo, lunulâ nullâ, areâ dorsali posticâ simplice; umbonibus satis eminentibus recurvatis* (i. e. *antrorsum inclinatis*), *margaritâ albo-argenteâ; dentibus lateralibus nullis; dentibus cardinalibus latis, trigonis, magnis.*

THE NETWORK UNIO. Shell swollen, thick, inequilateral, squarish-oboval, subbiangulated behind, of a uniform brown olive, smooth; ventral edge convex, rising in front; umbonal ridge rounded and tolerably conspicuous, ligament very narrow and scarcely at all projecting, no lunule, dorsal hinder area simple, umboes tolerably prominent, recurved (*i. e.* inclining forwards), nacre silvery white, no lateral teeth; primary teeth big, broad, triangular.

MORICAND (= *Monocondylea?*), Rev. et Mag. Zool. 1858. pl. 15. f. 2.

Alasmodonta Schomburgki, Hanley, MSS.

Hab. British Guiana (Schomburgk); Brazil (Moricand).

The shell here represented comes close to *Paraguayanus*, but differs entirely from D'Orbigny's type specimen. It is somewhat less elongated than the specimen delineated by Moricand, and has rather different teeth. The umbonal cavity extends far beneath the broad hinge-margin, which latter, besides a huge triangular tooth, bears likewise a second rudimentary one in each valve.

Species 459. (Mus. Hanley.)

UNIO TRIGONUS. *Un. testâ haud magnâ, solidâ, tumidâ, subtrigonâ, anticè brevi et subtruncatâ, posticè attenuatim subbiangulatâ et minus inflatâ, olivaceâ concolore, sublævigatâ; margine ventrali anticè arcuato, posticè retuso; costâ umbonali angulatâ, lunulâ magnâ, umbonibus eminentibus, margaritâ albâ; dentibus cardinalibus permagnis, trigonis, valde laciniatis; lamellis posticis longis.*

THE TRIANGULAR UNIO. Shell not large, solid, tumid, subtriangular, short and subtruncated in front, less swollen tapering and subbiangulated behind, olive, not variegated, almost smooth; ventral edge arched in front, retuse behind, umbonal ridge angular, lunule large, umboes prominent, nacre white; primary teeth very big, triangular, much jagged; posterior lamellæ elongated.

LEA, Obs. on Unio (Trans. Amer. Phil. Soc. vol. iv.), vol. i. p. 120. pl. 16. f. 40.

U. undatus, Barnes (probably).

Hab. Ohio, N. America.

This is not the shell erroneously so termed in Plate LXIV., but one kindly named by Lea himself. Whatever may be thought of the species with which he has inundated science during the last ten years, his great courtesy and extreme liberality are universally appreciated.

Species 460. (Mus. Taylor.)

UNIO STRIATISSIMUS. *Un. testâ crassiusculâ, depressâ, subrhomboideâ, subinæquilaterali, posticè latè biangulatâ, stramineâ seu flavescente, concolore, concentricè rudè rugosâ, margine ventrali anticè arcuatim acclivi, costâ umbonali subangulatâ vix elevatâ; lunulâ impressâ, lanceolatâ; natibus acutis, ad apices tantum plicis perpaucis obliquis undulatis; margaritâ albâ, margine cardinali lato dentibus cardinalibus subtrigonis laciniatis, et lamellis obliquis rectis percrassis, instructo.*

THE MUCH-STRIATED UNIO. Shell thickish, depressed, subrhomboid, subinequilateral, broadly biangular behind, yellowish or straw-coloured, not variegated, concentrically coarsely wrinkled; ventral edge arching upwards in front; umbonal ridge subangular, scarcely raised; lunule impressed and lanceolate, beaks acute and, at their tips only, waved with a very few slanting folds, nacre white; hinge-margin broad, provided with jagged subtriangular primary teeth, and very thick straight oblique lamellæ.

ANTHONY, Amer. Journ. Conch. 1865 (vol. i.), p. 155. pl.12. f. 1.

Hab. Tennessee.

The irregular corrugation becomes coarse with age, but the umbonal surface is merely striolate. The lateral teeth do not follow the dorsal line, but run downwards with peculiar obliquity.

Species 461. (Mus. Sowerby.)

UNIO ASTIERANUS. *Un. testâ haud magnâ, ovato-oblongâ, solidâ, ventricosâ, subinæquilaterali, anticè porrectâ et rotundatâ, posticè subbiangulatâ, brunneâ concolore, concentricè rugosiusculâ, ad umbones eminentes porcis latè undatis conspicuè instructâ; margine ventrali anticè arcuato, natibus acutis, involutis, lunulâ impressâ, margaritâ albâ, margine cardinali lato; dentibus cardinalibus subtrigonis, laciniatis; dentibus lateralibus validis.*

ASTIER'S UNIO. Shell not large, ovate-oblong, solid, ventricose, only moderately inequilateral, rounded and peculiarly projecting in front, subbiangulated behind, of a uniform brown, concentrically subrugose, conspicuously marked on the prominent umboes with broadly waved ridges; ventral edge arched in front, beaks acute and involute, lunule impressed, nacre white, hinge-margin broad, primary teeth jagged and subtriangular, lateral teeth strong.

DUPUY, Moll. de France, p. 636. pl. 23. f. 9.

U. cuneatus, Rossmässler (as of Jacq.).

Hab. Arles, S. France.

Allied to *litoralis*, but easily distinguished by the narrow square-cut ridges, which abruptly terminate at an acute angle before the umbonal slope.

Species 462. (Mus. Hanley.)

UNIO STONENSIS. *Un. testâ solidâ, depressâ vel convexâ, oblongâ, valde inæquilaterali, infernè subretusâ, fusco-flavescente concolore, sublævigatâ, costâ umbonali humili, lunulâ angustâ, natibus prominulis ad apices minute undulatis, margaritâ pallidè rubro-aurantiâ vel purpurascente; dentibus cardinalibus profundè striatis, pyramidalibus; dentibus lateralibus validis, elongatis.*

STONES'S UNIO. Shell solid, compressed or convex, oblong, very inequilateral, somewhat retuse below, of a uniform yellowish-brown, smoothish; umbonal ridge not raised, lunule narrow; beaks slightly prominent, minutely undulated at the tips; nacre salmon-coloured or purplish; primary teeth deeply striated, pyramidal; lateral teeth strong, elongated.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. viii. (Obs. on Unio, vol. iii. p. 33), pl. 8. f. 5.

Hab. Stones's River, Tennessee, America.

Species 463. (Mus. Hanley.)

UNIO HOCHSTETTERI. *Un. testâ crassiusculâ, depressâ, valde inæquilaterali, anticè perbrevi et angustâ, posticè late biangulatâ, subalatâ, olivaceo-nigrescente concolore, in mediâ parte obsoletè subverrucosâ, alibi sublævigatâ; margine ligamentali curvato et acclivi, areâ posticâ concavâ, lunulâ nullâ; margaritâ albido-cærulescente, maculis olivaceis variegatâ; dentibus cardinalibus subtransversis; dentibus lateralibus elongatis, ad apices valde elevatis et obliquè truncatis.*

HOCHSTETTER'S UNIO. Shell thickish, depressed, very inequilateral, narrow and very short in front, broadly biangular and somewhat winged behind, of a uniform blackish olive, very indistinctly subverrucose in the middle, elsewhere unsculptured; ligamental edge curved and rising, hinder area concave, no lunule; nacre bluish-white, variegated with olive; primary teeth somewhat transverse; lateral teeth elongated, much raised and obliquely truncated at their extremities.

DUNKER, Malak. Blätter, vol. viii. (1861), p. 153.

Hab. Lake Taupo, N. Zealand (teste Dunker).

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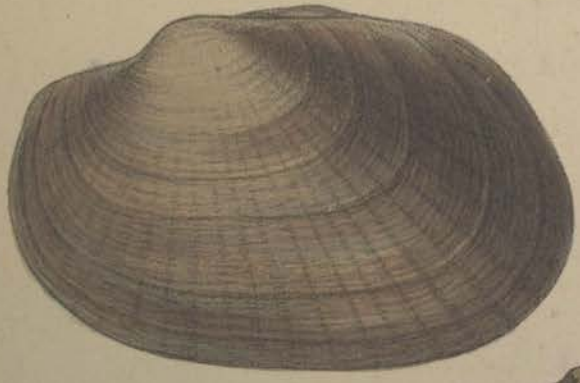

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Sowerby, del.et lith.

Vincent Brooks, Day & Son, Imp.

UNIO.

PLATE LXXXVII.

Species 464. (Copied from Conrad.)

UNIO CONSTRICTUS. *Un. testâ haud magnâ, ventricosâ, ellipticâ, subinæquilaterali, olivaceâ, obscurè radiatâ, sublævi, margine ventrali posticè incurvo, natibus eminentibus undulatisque, margaritâ albidâ; dentibus cardinalibus validis, erectis, subpyramidalibus; lamellis lateralibus satis brevibus.*

THE STRAINED UNIO. Shell not large, ventricose, elliptic, somewhat inequilateral, olive, with obscure rays, smoothish, incurved behind at the lower edge, beaks projecting and undulated, nacre whitish; primary teeth strong, erect, subpyramidal; lateral laminæ moderately short.

CONRAD, Monog. Union. N. Am. pl. 49. f. 4 (erroneously in text, p. 91, as *lienosus*, var. *constrictus*, corrected on Wrapper of Part II.).

Hab. North River, Virginia.

"The posterior angle is much above the line of the base. Several specimens exhibit the peculiar groove on the posterior side, which has suggested the name." (Conrad.)

Species 465. (Brit. Mus.)

UNIO SUBTORTUS. *Un. testâ solidâ, ventricosâ, obliquè ovatâ, maximè inæquilaterali, subtortâ, infernè arcuatâ, olivaceo-fuscâ, sericeâ, concentricè rugoso-striatâ; costâ umbonali conspicuâ; areâ posticâ dorsali remotè et obliquè nodoso-plicatâ, umbonibus eminentibus et posticè ad apices tuberculatis, margaritâ albidâ; dentibus cardinalibus crassis, duplicibus, subverticalibus, sulcatis; lamellis lateralibus elongatis, subarcuatis.*

THE SOMEWHAT-TWISTED UNIO. Shell solid, ventricose, obliquely ovate, peculiarly inequilateral, somewhat twisted, arched at the ventral margin, olive-brown, silky, concentrically wrinkle-striated, umbonal ridge conspicuous; hinder dorsal area with distant oblique nodulous folds, umboes prominent and posteriorly tuberculated at their tips, nacre whitish; primary teeth thick, two in each valve, almost vertical, grooved; lateral lamellæ elongated, somewhat curved.

BAIRD and ADAMS, Proc. Zool. Soc. 1867. p. 489. pl. 26. f. 1.

Hab. Shanghai, North China.

Species 466. (Mus. Hanley.)

UNIO FONTAINEANUS. *Un. testâ satis crassâ, in medio convexâ, nitidâ, utrinque depressâ, obliquè rotundato-obovatâ, anticè brevi angustatâ lirisque incrementi corrugatâ, posticè dilatatâ rotundato-quadratâ et sublævigatâ, brunneâ concolore, margine ligamentali curvato elevato, margine ventrali anticè rapidè acclivi, costâ umbonali nullâ, areâ posticâ dorsali concaviusculâ, sublævi, rugis elevatis obliquis perpaucis tantum instructâ, umbonibus vix eminentibus, lunulâ angustè lanceolatâ, margaritâ albo-cærulescente, margine cardinali angusto, dentibus cardinalibus laciniatis et sublaminatis, dentibus lateralibus arcuatis.*

FONTAINE'S UNIO. Shell moderately thick, convex in the middle, glossy, depressed at the sides, obliquely rounded-obovate, anteriorly short, narrow, and wrinkled by raised lines of growth, posteriorly dilated, rotundately squared and almost smooth, rich brown, not variegated, ligamental edge curved and elevated, ventral edge rapidly rising in front, no umbonal ridge, hinder dorsal area almost smooth, merely furnished with a very few raised slanting wrinkles, umboes scarcely raised, lunule narrowly lanceolate, nacre bluish-white, hinge-margin narrow, primary teeth jagged and sublaminar, lateral teeth arched.

D'ORBIGNY, Voy. Amér. Mérid. Moll. p. 605. pl. 69. f. 6, 7 (young).

U. rotundus, Moricand (not Spix).

Hab. S. America.

Four South American shells, of somewhat similar shape, having been delineated by their describers from immature examples, have fallen into much confusion,—*rotundus*, *Fontaineanus*, *variabilis*, and *membranaceus*. The last does not possess any teeth, and the last but one includes at least two species: our reference to Maton's figures should have excluded the transverse form.

Species 467. (Copied from Conrad.)

UNIO MELINUS. *Un. testâ crassiusculâ, ventricosâ, in medio subretusâ, ovali, vix inæquilaterali, nitidâ, luteâ, obsoletè radiatâ, costâ umbonali rotundatâ, natibus eminentibus, acutis, confertim et tenuiter concentricè undulatis, margaritâ albâ; dentibus cardinalibus obliquis in utrâque valvulâ 2; lamellis lateralibus productis, subcurvatis.*

THE HONEY-YELLOW UNIO. Shell thickish, ventricose, somewhat indented in the middle, oval, scarcely inequilateral, shining, dirty yellow, obsoletely rayed; umbonal ridge rounded; beaks prominent, acute, with fine and close concentric undulations; nacre white; primary teeth oblique, two in each valve; lateral lamellæ produced, somewhat curved.

CONRAD, Monog. Union. N. Am. pl. 56. f. 1.

Hab. Salina Line, New York.

There are many indistinct linear rays. *U. siliquoides* seems its nearest congener.

Species 468. (Copied from Conrad.)

UNIO CERINUS. *Un. testâ subventricosâ, subrhomboideâ, subinæquilaterali, posticè latè subbiangulatâ, fulvo-fuscâ concolore, sublævigatâ, infernè retusâ, costâ umbonali angulatâ, areâ posticâ dorsali latâ, umbonibus haud eminentibus; margaritâ albidâ, passim cereo-flavo fucatâ; dentibus cardinalibus validis, erectis, trigonis; lamellis lateralibus remotis, brevibus, rectis.*

THE WAXEN UNIO. Shell subventricose, subrhombic, subinequilateral, broadly subbiangulated behind, of a uniform tawny brown, smoothish, indented at the lower edge; umbonal ridge angular, hinder dorsal slope broad, umboes not prominent; nacre whitish, here and there stained with wax-yellow; primary teeth strong, erect, triangular; lateral lamellæ distant, short, straight.

CONRAD, Monog. Union. N. Am. pl. 52.

Hab. Southern States of N. America.

Allied to *subplanus*.

Species 469. (Mus. Brit.)

UNIO LAMPREYANUS. *Un. testâ solidâ, subventricosâ, ovato-subtrigonâ, infernè arcuatâ, anticè brevi et latiore, concentricè latè plicatâ, nitidâ, luteo-olivaceâ, fusco-viridi radiatâ; umbonibus eminentibus; lunulâ parvâ, distinctâ; margaritâ argenteâ; dentibus cardinalibus crassis, verticalibus, duplicibus, sulcatis; lamellis lateralibus curvatis, elongatis.*

LAMPREY'S UNIO. Shell solid, subventricose, subtriangularly ovate, arched below, short and broader in front, with broad concentric folds, glossy, yellow-olive with brownish-green rays; umboes prominent, lunule small and distinct, nacre silvery; primary teeth thick, vertical, two in each valve, grooved; lateral lamellæ curved, elongated.

BAIRD and ADAMS, Proc. Zool. Soc. 1867. p. 491. pl. 26. f. 2.

Hab. Shanghai, North China.

470.

471.

472.

473.

474.

475.

476.

Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

UNIO.

Plate LXXXVIII.

Species 470. (Copied from Moricand.)

Unio costulatus. *Un. testâ oblongâ, ventricosâ, valde inæquilaterali, posticè subattenuatâ et rotundato-biangulatâ, tenebroso-olivaceâ concolore, radiatim costulatâ; costulis posticis remotioribus, fortioribus; margine dorsali antico humili; margine ventrali anticè acclivi, posticè incurvato; natibus eminentibus et valde obliquis; margaritâ albo-cærulescente; dente cardinali crasso acuto in utráque valvulâ, lamellis lateralibus nullis.*

The thin-ribbed Unio. Shell oblong, ventricose, very inequilateral, somewhat tapering and rotundately biangulated behind, of a uniform dark olive, with narrow radiating ribs, which are stronger but further apart posteriorly; front dorsal edge low; ventral edge rising in front, much indented behind; beaks projecting, much slanting; nacre bluish-white, a single thick and acute primary tooth in each valve, no lateral laminæ.

Moricand, Rev. et Mag. Z. 1858. pl. 15. f. 1.

Hab. Brazil.

The epidermis is somewhat loose.

Species 471. (Copied from Lea.)

Unio Rowellii. *Un. testâ parvâ, crassiusculâ, vix subventricosâ, subinæquilaterali, ellipticâ, concentricè sulcatâ, rufo-fuscâ, obscurè radiatâ, costâ umbonali rotundatâ vixque elevatâ, natibus prominulis ad apices minutè undulatis, margaritâ albâ; dentibus cardinalibus compressis, elevatis, crenulatis; dentibus lateralibus subrectis, satis elongatis.*

Rowell's Unio. Shell small, thickish, scarcely even subventricose, subinequilateral, elliptic, concentrically grooved, reddish-brown; umbonal ridge rounded and scarcely raised, beaks slightly projecting and minutely undulated at the tip, nacre white; primary teeth compressed, elevated, crenulated; lateral teeth straightish, tolerably long.

Lea, Obs. on Unio, vol. vii. (Journ. Ac. Nat. Sc. Philad. ser. 2. vol. iv.), p. 74. pl. 40. f. 136.

Hab. Chargres river, New Granada.

The reddish-brown of the epidermis inclines to olive, and the ligament is light brown.

Species 472. (Copied from Lea.)

Unio Wilsonii. *Un. testâ tenui, depressiusculâ, oblongo-ellipticâ, infernè subretusâ, concentricè confertim tenuisulcatâ, nitidâ, olivaceo-viridi, obscurè radiatâ; costâ umbonali rotundatâ, vix elevatâ; lunulâ nullâ, natibus prominulis haudque insculptis, margaritâ albo-cærulescente; dentibus cardinalibus parvis, obliquis, lamellatis; dentibus lateralibus elongatis, subrectis.*

Wilson's Unio. Shell thin, rather depressed, elliptic-oblong, somewhat retuse below, with delicate and crowded concentric grooves, shining, olive-green, obscurely rayed; umbonal ridge rounded and scarcely raised, no lunule, beaks a little prominent and not sculptured, nacre bluish-white; primary teeth small, oblique, lamellar; lateral teeth long, straightish.

Lea, Obs. on Unio, vol. vii. (Journ. Ac. Nat. Sc. Philad. ser. 2. vol. iv.), p. 74. pl. 40. f. 137.

Hab. Isaac's Plain, New S. Wales.

The primary teeth are double in the right valve, single in the left.

Species 473. (Copied from Lea.)

Unio Plantii. *Un. testâ crassiusculâ, valde compressâ, ellipticâ, inæquilaterali, lævi, nitidâ, fusco-castaneâ, margine ventrali arcuato, costâ umbonali humili et rotundatâ, natibus prominulis, margaritâ pallidè aurantio-rubrâ; dentibus cardinalibus haud magnis, obtusè conicis, crenulatis; dentibus lateralibus prælongis, curvatis, corrugatis.*

Plant's Unio. Shell rather thick, much compressed, elliptic, inequilateral, smooth, shining, of a uniform dark chestnut; ventral edge arcuated, umbonal ridge low and rounded, beaks a little projecting, nacre salmon-coloured; cardinal teeth rather small, obtusely conical, crenulated; lateral teeth very long, curved, corrugated.

Lea, Obs. on Unio, vol. vii. (Journ. Ac. Nat. Sc. Philad. ser. 2. vol. iv.), p. 10. pl. 21. f. 76.

Hab. Flint river, near Macon, Georgia, U. S. America.

Described by Lea from a single specimen, the beaks of which were much eroded.

Species 474. (Copied from Lea.)

Unio Connasaughensis. *Un. testâ tenuissimâ, obtusè*

cuneiformi, utrinque rotundatâ, anticè depressâ et concentricè striatâ, posticè lævi et ventricosâ, infernè retusâ, subviridi-flavâ, posticè obscurè radiatâ, costâ umbonali rotundatâ; natibus prominulis ad apices transversim undatis, margaritâ albo-cærulescente; in utrâque valvulâ, dente parvo, tuberculiformi, compresso.

THE CONNASAUGA UNIO. Shell very thin, bluntly wedge-shaped, rounded at each end, depressed and concentrically striated in front, smooth and ventricose behind, retuse beneath, greenish-yellow, indistinctly rayed posteriorly; umbonal ridge rounded, beaks rather projecting and with transverse waves at their tips, nacre bluish-white; a single small compressed tubercle-like tooth in each valve.

LEA (*Margaritana*), Obs. on Unio, vol. vii. (Journ. Ac. Nat. Sc. Philad. ser. 2. vol. iv.), pl. 32. f. 113.

Hab. Connasauga river, Georgia, U. S. America.

When young, the capillary rays extend over the entire disk.

Species 475. (Copied from Lea.)

UNIO BULLOIDES. *Un. testâ subtenui, inflatâ, subæquilaterali, nonnihilo rotundato-subquadratâ, anticè angustatâ, posticè truncatâ et supernè rectangulari, infernè arcuatâ, luteo-fuscâ concolore, concentricè confertim sulcatâ, costâ umbonali rotundatâ et elevatâ, lunulâ nullâ, areâ dorsali posticâ latâ; umbonibus prominulis, porcis radiantibus parvis ornatis; margaritâ albâ; dentibus cardinalibus prælongis, lamellatis, valde obliquis; dentibus lateralibus subrectis.*

THE STUD-LIKE UNIO. Shell thinnish, inflated, subequilateral, of a somewhat rotundately squarish form, but narrowed in front; truncated and rectangular above posteriorly, arcuated at the ventral margin, of a uniform yellow-brown, with close-set concentric furrows; umbonal ridge raised and rounded, no lunule, hinder dorsal area broad, umboes rather prominent and adorned with radiating ridges, nacre white; primary teeth very long, lamellar, very oblique; lateral teeth straightish.

LEA, Obs. on Unio, vol. vii. (Journ. Ac. Nat. Sc. Philad. ser. 2. vol. iv.), p. 83. pl. 42. f. 144.

Hab. Rio de la Plata, S. America.

Lea, who described this rare shell from a single specimen, remarks that in outline it approaches *U. Paranensis.*

Species 476. (Copied from Lea.)

UNIO SPISSUS. *Un. testâ crassâ, ventricosâ (anticè autem depressâ), subæquilaterali, subelliptică, posticè obtusè biangulatâ, fusco-rufescente, obscurè radiatâ, infernè concentricè striatâ (vel sulcatâ), supernè nitidâ lævique, costâ umbonali valde elevatâ et obtusè angulatâ, areâ posticâ, dorsali latissimâ, rudè striatâ et biporcatâ, lunulâ angustâ, margaritâ sæpius purpureâ (aliquando autem pallidè rubro-aurantiâ); dentibus cardinalibus magnis, erectis, compressis, crenulatis; dentibus lateralibus percrassis, elongatis, subarcuatis.*

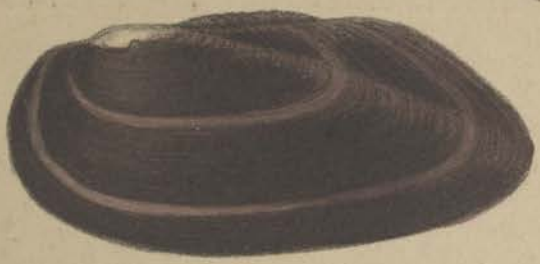
THE COMPACT UNIO. Shell thick, ventricose (but depressed in front), subequilateral, subelliptic, bluntly biangulated behind, reddish-brown, obscurely rayed, striated or grooved concentrically below, shining and smooth above; umbonal ridge much elevated and bluntly angular, hinder dorsal area very broad, coarsely striated and double-ridged, lunule narrow, nacre usually purple (sometimes salmon-coloured); primary teeth big, erect, compressed, crenulated; lateral teeth long, very thick, somewhat curved.

LEA, Obs. on Unio, vol. vii. (Journ. Ac. Nat. Sc. Philad. ser. 2. vol. iv.), p. 26. pl. 25. f. 89.

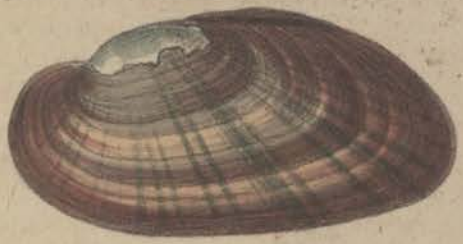
Hab. Satilla river, Georgia, America.

Allied to *Lecontianus*, but less transverse.

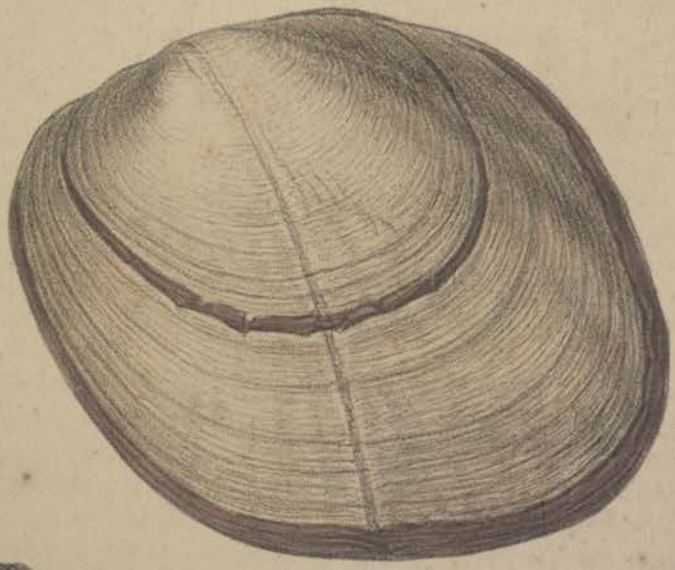
477.



478.



479.



480.

481.

482.

483.

Sowerby del. et lith.

Vincent Brooks, Day & Son, Imp.

UNIO.

PLATE LXXXIX.

Species 477. (Copied from Lea.)

UNIO CALDWELLII. *Un. testâ haud magnâ, satis crassâ, vix subinæquilaterali, satis compressâ, ellipticâ, fusco-lutescente concolore, confertim concentricè sulcatâ; costâ umbonali paululum elevatâ et rotundatâ; areâ posticâ dorsali subangustâ, lineâ impressâ radiante instructâ; natibus prominulis ad apices minutè undulatis, lunulâ angustâ, margaritâ pallidè rubro-aurantiâ; dentibus cardinalibus satis magnis, erectis, compressis, crenulatis; dentibus lateralibus subrectis.*

CALDWELL'S UNIO. Shell not large, thickish, scarcely inequilateral, tolerably compressed, elliptic, of a uniform yellowish-brown, with close-set concentric sulci; umbonal ridge but slightly raised and rounded; hinder dorsal area somewhat narrow and furnished with a radiating impressed line; beaks a little projecting and minutely undulated at their tips, lunule narrow, nacre salmon-coloured; primary teeth tolerably large, erect, compressed, crenulated; lateral teeth straightish.

LEA, Obs. on Unio, vol. vii. (Journ. Ac. Nat. Sc. Philad. ser. 2. vol. iv.), p. 83. pl. 43. f. 145.

Hab. Isthmus of Darien.

Described by Lea from a single specimen. The furrows are less impressed posteriorly.

Species 478. (Copied from Lea.)

UNIO PARALLELOPIPEDON. *Un. testâ oblongo-elongatâ, subobliquâ, subcylindraceâ, inæquilateruli, crassiusculâ, anticè infernè acclivi, posticè subbiangulatâ, sublævigatâ, nigrescente concolore; costâ umbonali angulatâ, natibus prominulis, plicis radiantibus ornatis; margaritâ albidâ; dentibus cardinalibus obliquis, cristatis; lamellis lateralibus rectis, elongatis.*

THE PARALLELOGRAM UNIO. Shell elongated-oblong, somewhat oblique, subcylindraceous, inequilateral, thickish, in front sloping upwards ventrally, behind somewhat biangulated, smoothish, of a uniform blackish hue; umbonal ridge angular, beaks rather projecting and adorned with radiating folds, nacre whitish; primary teeth oblique and crested; lateral lamellæ straight and elongated.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. v. (Obs. on Unio, vol. i.), p. 60. pl. 8. f. 20.

Hab. River Parana, Corrientes, S. America.

Species 479. (Copied from Lea.)

UNIO GRIFFITHIANUS. *Un. testâ oblongo-ellipticâ, depressâ, subinæquilaterali, crassiusculâ, anticè porrectâ et angustatâ, attenuato-subbiangulatâ, infernè subretusâ, lutea, radiis obscurè viridibus ornatâ, natibus prominulis, costâ umbonali vix elevatâ, margaritâ variâ; dentibus cardinalibus haud magnis; lamellis lateralibus longis.*

GRIFFITH'S UNIO. Shell oblong-elliptic, depressed, not very inequilateral, thickish, projecting yet narrowed in front, taperingly subbiangulated behind, somewhat indented at the base, dirty yellow with obscure green rays; beaks somewhat prominent, umbonal ridge scarcely raised, nacre variable; primary teeth not large; lateral lamellæ elongated.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. v. (Obs. on Unio, vol. i.), p. 103. pl. 15. f. 46.

Hab. S. Carolina.

Allied to *complanatus*, but more elongated.

Species 480. (Copied from Lea.)

UNIO RHOMBOIDEUS. *Un. testâ magnâ, tenui, compressâ, obliquè subrhomboideâ, valde inæquilaterali, anticè infernè angustatâ, posticè latâ et subalatâ, nitidâ, olivaceâ, aliquando obscurè radiatâ, concentricè substriatâ; margine ventrali anticè acclivi, posticè arcuato; costâ umbonali humili, vixque rotundatâ; areâ dorsali posticâ perangustâ, radiisque binis linearibus ornatâ; natibus vix prominulis ad apices minutè undulatis; margaritâ aureâ, vel purpurascente; dentibus (seu potius tuberculis) cardinalibus compressis, in utrâque valvulâ singulis; lamellis lateralibus nullis.*

THE RHOMBOID UNIO. Shell large, thin, compressed, obliquely subrhomboid, very inequilateral, narrowed in front below, broad and somewhat winged behind, glossy, olive, at times obscurely rayed, somewhat striated concentrically; ventral edge rising in front, arched behind; umbonal ridge low and scarcely rounded; hinder dorsal area very narrow, adorned with two linear rays; beaks scarcely at all projecting, minutely waved at the tips; nacre golden-yellow or purplish; primary teeth (or rather tubercles) compressed, one in each valve; no lateral lamellæ.

LEA, Obs. on Unio, vol. vii. (Journ. Ac. Nat. Sc. Philad. ser. 2. vol. iv.), p. 81. pl. 42. f. 143.

Hab. The Euphrates, near Bagdad.

Quite as much an *Anodon* as a *Unio:* it belongs to the subgenus *Pseudodon*, of Gould.

Species 481. (Copied from Lea.)

UNIO EXIMIUS. *Un. testâ haud magnâ, tenuissimâ, valde depressâ, inæquilaterali, trigonâ, anticè perangustâ, posticè dilatatâ et alatâ, subviridi-luteâ, supra costam umbonalem triradiatâ; margine ventrali retuso, natibus vix eminentibus, minutè undulatis, margaritâ albido-cærulescente; dentibus cardinalibus tenuibus, lamellaribus; lamellis lateralibus longis, subrectis.*

THE CHOICE UNIO. Shell not large, very thin, much depressed, inequilateral, triangular, very narrow in front, dilated and winged behind, greenish-yellow with three rays beyond the umbonal ridge; ventral edge indented, beaks scarcely prominent and minutely undulated, nacre bluish-white; primary teeth thin and lamellar, lateral teeth long and straightish.

LEA, Journ. Ac. Nat. Sc. Philad. ser. 2. vol. iii. (Obs. on Unio, vol. vi. p. 14), pl. 25. f. 8.

Hab. Siam.

There are numerous small folds both upon the beaks and the posterior slope: there is no distinct lunule. In the few known examples there are actually three lateral laminæ in the left valve, and two in the right.

Species 482. (Copied from Lea.)

UNIO TUMIDULUS. *Un. testâ haud magnâ, satis crassiusculâ, ventricosâ, inæquilaterali, obliquè oblongo-ellipticâ, posticè attenuatâ et subangulatâ, tenebroso-olivaceâ, striatâ; margine ventrali arcuato, costâ umbonali subangulatâ, natibus eminentibus minutè plicatis, margaritâ albâ; dentibus cardinalibus longis, lamellatis, in valvulâ dextrâ duobus; dentibus lateralibus elongatis, subcurvatis.*

THE LITTLE SWOLLEN UNIO. Shell not large, moderately thickish, ventricose, inequilateral, obliquely oblong-elliptic, tapering and subangular behind, dark olive, striated; ventral edge arched, umbonal ridge subangular, beaks prominent and with minute folds, nacre white; primary teeth long and lamellar, two in each valve; lateral teeth elongated and somewhat curved.

LEA, Journ. Ac. Nat. Sc. Philad. ser. 2. vol. iii. (Obs. on Unio, vol. vi. p. 15), pl. 25. f. 9.

Hab. Siam.

There are three green rays upon the posterior slope.

Species 483. (Copied from Lea.)

UNIO FULVUS. *Un. testâ parvâ, haud crassâ, oblongâ (seu angustè ellipticâ), subinæquilaterali, anticè compressâ, posticè convexâ (seu subventricosâ) et subbiangulatâ, fulvâ seu luteo-brunneâ, sublævigatâ; costâ umbonali rotundatâ, natibus prominulis, margaritâ supernè pallidè rubro-aurantiâ; dentibus cardinalibus obliquis, parvis; lamellis lateralibus subrectis.*

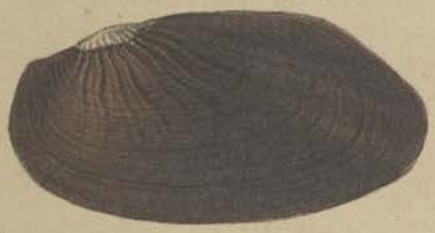
THE TAWNY UNIO. Shell small, not thick, oblong (or narrowly elliptical), only somewhat inequilateral, compressed in front, convex (or subventricose), and subbiangulated behind, fulvous or yellow-brown, smoothish; umbonal ridge rounded, beaks somewhat projecting, nacre salmon-coloured above; primary teeth small and oblique; lateral lamellæ scarcely curved.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. v. (Obs. on Unio, vol. i.), p. 96. pl. 13. f. 39.

U. icterinus, Conrad (teste Lea).

Only known to us from Lea's figure and description. Apparently there is a rudimentary lunule; the primary teeth seem normal, *i. e.* single in one valve (the right), double in the other.

484.



485.

486.

487.

488.

489.

490.

Sowerby, del. et. lith.

Vincent Brooks Day & Son. Imp.

UNIO.

PLATE XC.

Species 484. (Copied from Lea.)

UNIO ISOCARDIOIDES. *Un. testâ parvâ, vix crassiusculâ, inflatâ, valde inæquilaterali, subquadratâ, infernè retusâ, ad umbones tumidâ, anticè truncatâ, tenebroso-olivaceâ concolore, impolitâ, lævigatâ; costâ umbonali angulatâ, areâ dorsali posticâ latâ et planulatâ; natibus eminentibus inclinatis et recurvatis, concavitate sulciformi radiante præcessis; lunulâ latâ; margaritâ albâ et iridescente; dentibus cardinalibus brevibus, transversis, compressis, crenatis, in utrâque valvulâ 2; lamellis lateralibus nullis.*

THE ISOCARDIAN UNIO. Shell small, scarcely even thickish, inflated, very inequilateral, subquadrate, retuse beneath, swollen at the umboes, truncate in front, of a uniform dark olive, dull, smooth; umbonal ridge angular; hinder dorsal area broad and flattened; beaks prominent, recurved and inclined, preceded by a radiating groove-like concavity; lunule broad; nacre white and iridescent; two short transverse compressed crenated primary teeth in each valve; no lateral lamellæ.

LEA (*Plagiodon*), Journ. Ac. Nat. Sc. Philad. ser. 2. vol. iii. (Obs. on Unio, vol. vi. p. 38), pl. 32. f. 32.

Hab. Rio Plata.

A remarkable shell, described from a single individual, and constituted a genus of, by Lea. The lunule is marked with several impressed parallel transverse lines.

Species 485. (Copied from Lea.)

UNIO DUNKERIANUS. *Un. testâ haud crassâ, magis minusve ventricosâ, oblongo-ellipticâ, inæquilaterali, supernè utrinque angulatâ, nitidâ, fusco-nigrescente, concentricè subrugosâ, umbonibus costis obliquis satis magnis ornatis, costâ umbonali rotundatâ, natibus prominulis, margaritâ albâ; dentibus cardinalibus longis, compressis, in valvulâ dextrâ 2; lamellis lateralibus productis, subrectis.*

DUNKER'S UNIO. Shell not thick, more or less ventricose, oblong-elliptic, inequilateral, angulated at each end of the dorsal edge, glossy, blackish-brown, somewhat wrinkled concentrically; umboes adorned with somewhat large oblique ribs, umbonal ridge rounded, beaks a little projecting, nacre white; primary teeth long, compressed, two in the right valve; lateral lamellæ produced, straightish.

LEA, Journ. Ac. Nat. Sc. Philad. ser. 2. vol. iii. (Obs. on Unio, vol. vi. p. 25), pl. 28. f. 20.

Hab. Rio Janeiro (Dunker), and New Granada (Verreaux).

Species 486. (Copied from Lea.)

UNIO POEYANUS. *Un. testâ crassiusculâ, subcylindraceâ, in medio retusâ, inæquilaterali, arcuatim elongato-oblongâ, infernè incurvatâ, anticè brevi sed porrectâ, luteâ seu luteo-olivaceâ, posticè lævigatâ, anticè concentricè striatâ, costâ umbonali leviter subcarinatâ, natibus prominulis, haud undulatis; margaritâ flavescente; dentibus cardinalibus subcompressis, crenulatis; lamellis lateralibus rectis, productis.*

POEY'S UNIO. Shell thickish, subcylindraceous, retuse in the middle, inequilateral, curved elongated-oblong, incurved ventrally, short but projecting in front, yellow or olive-yellow, nearly smooth behind, concentrically striated in front; umbonal ridge slightly subcarinated; beaks a little prominent; not undulated, nacre yellowish; primary teeth somewhat compressed, crenulated; lateral lamellæ straight, produced.

LEA, Journ. Ac. Nat. Sc. Philad. ser. 2. vol. iii. (Obs. on Unio, vol. vi. p. 35), pl. 32. f. 30.

Hab. Rio de las Balsas, near Coyucan, Mexico.

The surface is most minutely granular.

Species 487. (Copied from Lea.)

UNIO WHEATLEYANUS. *Un. testâ crassâ, ventricosâ, subelliptică, subinæquilaterali, posticè subbiangulatâ, infernè subarcuatâ, tenebroso-olivaceâ, sublævigatâ, ad umbones costis divergentibus radiatâ, costâ umbonali obtusè angulatâ, natibus prominulis, lunulâ aut nullâ vel inconspicuâ, margaritâ albidâ seu carneâ; dentibus cardinalibus magnis, crenulatis, in utrâque valvulâ 2; dentibus lateralibus validis, productis, obliquis.*

WHEATLEY'S UNIO. Shell thick, ventricose, somewhat elliptic, somewhat inequilateral, subbiangular posteriorly, somewhat arched ventrally, dark olive, smoothish, rayed at the umboes with diverging ribs; umbonal ribs bluntly angular, beaks a little projecting, lunule, if any, inconspicuous, nacre whitish or flesh-colour; primary teeth large, crenulated, two in

each valve; lateral lamellæ strong, produced, slanting.

LEA, Journ. Ac. Nat. Sc. Philad. ser. 2. vol. iii. (Obs. on Unio, vol. vi. p. 28), pl. 29. f. 23.

Hab. Rio Plata and Rio Negro, S. America.

Species 488. (Copied from Lea.)

UNIO FAVOSUS. *Un. testâ crassâ, depressiusculâ, latè ovali, subinæquilaterali, posticè subbiangulatâ, superne lævi, infernè concentricè striatâ, saturatius olivaceo-luteâ, macularum viridium serie unicâ ante costam umbonalem subrotundatam ornatâ; margine ventrali arcuato; lunulâ vel nullâ, vel inconspicuâ; natibus prominulis, ad apices undis subrudibus 2–3 ornatis, margaritâ albâ; dentibus cardinalibus magnis, erectis, pyramidalibus, crenulatis, in valvulâ sinistrâ 2; lamellis lateralibus productis.*

THE HONEY-COMBED UNIO. Shell thick, somewhat depressed, broadly oval, somewhat inequilateral, subbiangular behind, smooth above, concentrically striated below, dark olive-yellow, with a single row of broad spots before the somewhat rounded umbonal ridge; ventral edge arched; lunule, if any, not conspicuous; beaks a little projecting, adorned with two or three rather coarse undulations, nacre white; primary teeth large, erect, pyramidal, two in the left valve; lateral lamellæ produced.

LEA, Journ. Ac. Nat. Sc. Philad. ser. 2. vol. iv. (Obs. on Unio, vol. vi. p. 58), pl. 8. f. 40.

Hab. Othcalooga Creek, Georgia, America.

Species 489. (Copied from Lea.)

UNIO JAVANUS. *Un. testâ crassiusculâ, in medio subventricosâ, valde inæquilaterali, subovatâ, anticè infernè acclivi, posticè depressâ et subbiangulatâ, lævi, nitidâ, fusco-lutescente concolore; natibus vix prominulis, margaritâ albâ; dentibus cardinalibus perparvis, in valvulâ dextrâ singulis; lamellis lateralibus longis, curvatis.*

THE JAVANESE UNIO. Shell thickish, subventricose in the middle, very inequilateral, subovate, sloping upwards in front below, depressed and subbiangular behind, smooth, shining, of a uniform yellow-brown; beaks scarcely prominent, nacre white; primary teeth very small, single in the right valve; lateral lamellæ long, curved.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. viii. (Obs. on Unio, vol. iii. p. 58), pl. 18. f. 37.

U. mutatus, Mousson, teste Philippi.

Hab. Java.

The colour is said to be very dark on the hinder dorsal slope, on which are depicted some oblique diverging wrinkles. If Philippi should be right as to its identity with *mutatus*, the colour of the epidermis should be green or olivaceous.

Species 490. (Copied from Lea.)

UNIO RUBELLIANUS. *Un. testâ parvâ, magis minusve crassâ, subventricosâ, elongato-oblongâ, infernè latè incurvatâ, posticè subattenuatâ angulatâ et plicis parvis divergentibus instructâ, alibi lævigatâ, rubellâ, obsoletè radiatâ, costâ umbonali angulatâ; natibus eminentibus et sparsim irregulariter undulatis, margaritâ aurantio-rubrâ; dentibus cardinalibus parvis, erectis, acutis; lamellis lateralibus rectiusculis.*

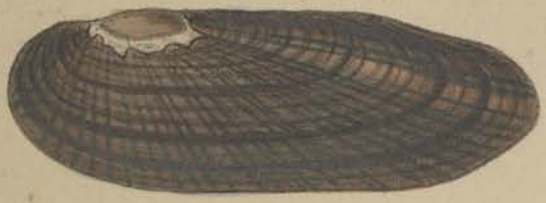
THE RUDDY UNIO. Shell small, more or less thick, subventricose, elongated-oblong, broadly incurved ventrally, somewhat tapering angular and marked with small diverging folds behind, elsewhere smooth, reddish, with indistinct rays; umbonal ridge angular; beaks prominent, with a few irregular undulations, nacre reddish salmon-colour; primary teeth small, erect, sharp; lateral lamellæ straightish.

LEA, Journ. Ac. Nat. Sc. Philad. ser. 2. vol. iv. (Obs. on Unio, vol. vi. p. 70), pl. 13. f. 51.

Hab. Othcalooga Creek, Georgia, America.

"The rays are indistinct, and are formed partly by obscure arrowhead or zigzag markings, which are plainer on the posterior half."

491.

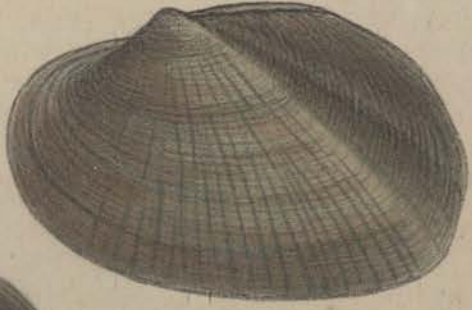


492.

493.

494.

495.



496.

497.

Sowerby, del.et lith

Vincent Brooks, Day & Son, Imp.

UNIO.

PLATE XCI.

Species 491. (Copied from Lea.)

UNIO ORIENTALIS. *Un. testâ crassiusculâ, depressâ, oblongo-elongatâ, inæquilaterali, lævi, nitidâ, luteâ, zonis incrementi angustis fusco-viridibus pictâ, costâ umbonali angulatâ; areâ posticâ dorsali liris binis radiantibus, et radiis angustis ornatâ; natibus vix eminentibus, ad apices minutè undulatis; margaritâ albâ; dentibus cardinalibus compressis longisque; lamellis lateralibus productis.*

THE ORIENTAL UNIO. Shell thickish, depressed, elongated-oblong, inequilateral, smooth, shining, dirty yellow, painted with narrow green-brown zones of increase; umbonal ridge angular, hinder dorsal area with two raised lines, and narrow rays; beaks scarcely projecting, with small undulations at their tips; nacre white; primary teeth long and compressed; lateral lamellæ produced.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. viii. (Obs. on Unio, vol. iii. p. 59), pl. 18. f. 38.

U. productus, Mousson, teste Philippi.

Hab. Java?

As often happens, the figure and description do not quite coincide. It is said to be yellow inclining to greenish-brown, with two *yellow* rays on the posterior dorsal area. *U. productus* is described as of a uniform greenish-brown.

Species 492. (Copied from Lea.)

UNIO DUTTONIANUS. *Un. testâ crassiusculâ, subdepressâ, valde inæquilaterali, subcylindraceâ, infernè retusâ, posticè attenuatâ et subbiangulatâ, fuscâ, inconspicuè radiatâ (in tabulâ autem color videtur fusco-lutescens, lineis virentibus radiatus), areâ posticâ dorsali latâ et planulatâ, margaritâ albâ; dentibus cardinalibus perparvis; lamellis lateralibus productis, tenuibus, haud curvatis.*

DUTTON'S UNIO. Shell thickish, somewhat depressed, very inequilateral, subcylindraceous, indented below, attenuated and subbiangular behind, dark brown with indistinct rays (in the Plate the colour seems yellow-brown with the linear rays dark green), hinder dorsal area broad and flattened, nacre white; primary teeth very small; lateral lamellæ produced, thin, not curved.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. viii. (Obs. on Unio, vol. iii. p. 74), pl. 22. f. 50.

Hab. Savannah, Georgia, America.

Allied to *folliculatus*.

Species 493. (Copied from Lea.)

UNIO FOLLICULATUS. *Un. testâ subtenui, depressâ (in medio præsertim), subcylindraceâ, valde inæquilaterali, infernè retusâ, posticè subbiangulatâ, sublæviganâ, fusco-nigrescente; natibus vix eminentibus, margaritâ sæpius purpureâ; dentibus cardinalibus parvis, lobatis; lamellis lateralibus longis, paululum curvatis.*

THE SADDLE-BAGGED UNIO. Shell thinnish, depressed (especially in the middle), subcylindraceous, very inequilateral, indented below, subbiangular behind, not sculptured, blackish-brown; beaks scarcely projecting, nacre usually purple; primary teeth small and lobed; lateral lamellæ long and very slightly curved.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. vi. (Obs. on Unio, vol. ii. p. 38), pl. 11. f. 33.

Hab. Savannah river, Georgia, America.

Allied to *Shepardianus*, and not improbably a young variety.

Species 494. (Copied from Lea.)

UNIO DARIENSIS. *Un. testâ crassiusculâ, inæquilaterali, oblongâ, infernè haud retusâ, anticè concavo-depressâ, posticè inflatâ et biangulatâ, lævi, fusco-lutescente, obsoletè radiatâ; costâ umbonali elevatâ, satis acutè subcarinatâ, posticè planulatâ; natibus prominulis, planulatis, margaritâ albâ; lamellis lateralibus productis.*

THE UNIO OF DARIEN. Shell thickish, inequilateral, oblong, not indented below, concavely depressed in front, inflated and biangular behind, smooth, yellowish-brown, obsoletely rayed; umbonal ridge elevated, rather sharply subcarinated, flattened behind; beaks rather prominent, flattened, nacre white; lateral lamellæ produced.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. viii. (Obs. on Unio, vol. iii. p. 84), pl. 26. f. 61.

Hab. Near Darien, Georgia, America.

Remarkable for its high acutely angular umbonal ridge, and flattened sides.

Species 495. (Copied from Lea.)

UNIO SAPOTALENSIS. *Un. testâ crassâ, nisi anticè ventricosâ, ad umbones autem planulatâ, inæquilaterali, subovali, infernè retusâ, posticè subbiangulatâ, luteâ, lineis permultis viridibus undique radiatâ; costâ umbonali subcarinatâ, natibus vix prominulis, margaritâ subaureâ et pulcherrimè iridescente; dentibus cardinalibus satis magnis, in valvulâ dextrâ singulis; lamellis lateralibus magnis, remotis, rectiusculis.*

THE SAPOTAL UNIO. Shell thick, ventricose except in front, yet flattened at the umboes, inequilateral, suboval, indented below, subbiangular behind, yellow, everywhere rayed with very numerous green lines; umbonal ridge subcarinated, beaks scarcely projecting, nacre of a somewhat golden yellow, and beautifully iridescent; primary teeth moderately large, single in the right valve; lateral lamellæ large, distant, straightish.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. viii. (Obs. on Unio, vol. iii. p. 71), pl. 21. f. 47.

Hab. Sapotal river, Tlocotalpam, Mexico.

Species 496. (Copied from Lea.)

UNIO DECORATUS. *Un. testâ subtenui, depressiusculâ, subovatâ, subinæquilaterali, infernè vix retusâ, viridi-flavescente, radiis capillaribus multis fere undique ornatâ, lævi; costâ umbonali subangulatâ, areâ dorsali posticâ latiusculâ; natibus prominulis, compressis, ad apices undularum serie duplici concentricè instructis, margaritâ albâ; dentibus cardinalibus satis parvis, lamellaribus, in valvulâ dextrâ singulis; lamellis lateralibus brevibus, rectis.*

THE ADORNED UNIO. Shell thinnish, rather depressed, subovate, somewhat inequilateral, scarcely indented below, yellowish-green, almost everywhere adorned with numerous capillary rays, smooth; umbonal ridge subangular, hinder dorsal area broadish; beaks a little projecting, compressed, the tips with a double row of concentric undulations, nacre white; primary teeth rather small, lamellar, single in the right valve; lateral lamellæ short and straight.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. x. (Obs. on Unio, vol. v. p. 13), pl. 13. f. 6.

Hab. S. Carolina, America.

This pretty shell, which reminds one of *U. pressus* (*Symphonota compressa*), is somewhat disposed to be winged.

Species 497. (Mus. D'Orbigny in Mus. Brit.)

UNIO MINUANUS. *Un. testâ crassâ, ventricosâ, subinæquilaterali, obliquè subovali, subrhombeâ, anticè angustâ sed porrectâ, sublævigatâ, cinereo-luteo-viridescente, lineis virentibus supra costam umbonalem rotundatam radiatâ; margine dorsali antico perhumili, brevi, incurvato-acclivi, ad extremitatem angulato; lunulâ magnâ et maximè profundâ; margine ventrali subarcuato, anticè acclivi; umbonibus eminentibus, natibus acutis inflexisque, margaritâ argenteâ; cardine ut in* fossiculifero, *tuberculis autem magis lamellatis.*

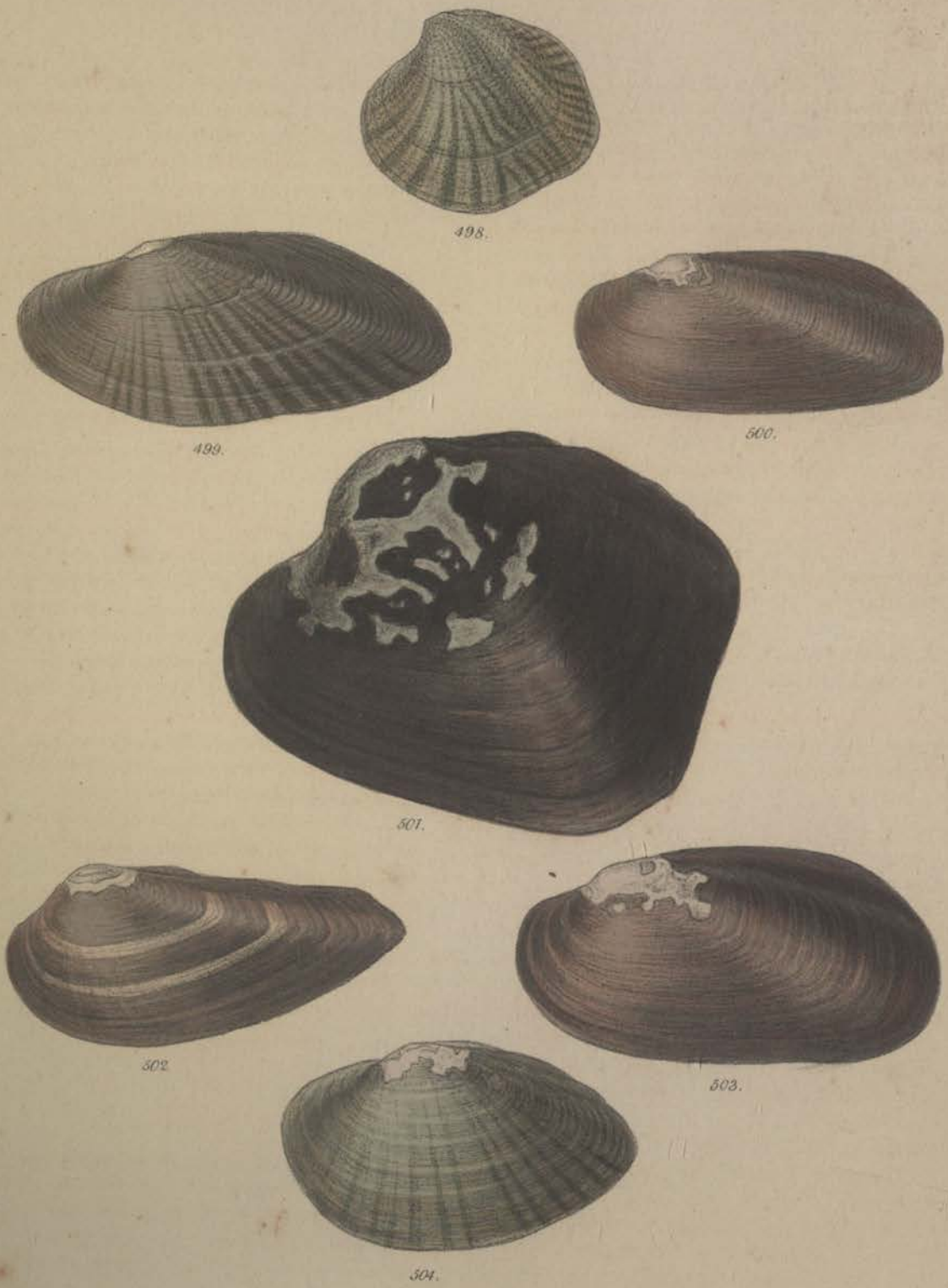
THE MINUAN UNIO. Shell thick, ventricose, rather inequilateral, obliquely suboval, subrhombic, narrow yet peculiarly jutting out in front, smoothish, ashy yellowish-green, with dark green linear rays beyond the rounded umbonal ridge; front dorsal edge very low, short, incurvately rising, angulated at its extremity; lunule large and very profound; ventral margin subarcuated, rising in front; umboes prominent, beaks acute and inflexed, nacre silvery; hinge as in *fossiculiferus*, but tubercles more laminar.

D'ORBIGNY (*Monocondylæa*), Amér. Mérid. Moll. p. 612. pl. 70. f. 8, 9, 10.

U. Parchappii, D'Orb.

Hab. La Plata.

In *Parchappii* (from the Argentine Republic) the nacre has a somewhat orange tint.



498.

499.

500.

501.

502.

503.

504.

Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

UNIO.

PLATE XCII.

Species 498. (Copied from Lea.)

UNIO LAMARCKIANUS. *Un. testâ crassâ, depressâ, in medio planulatâ, subæquilaterali, posticè obtusè biangulatâ, infernè arcuatâ, luteâ, radiis viridibus punctatis interruptis subcatenatis (anticè majoribus) undique ornatâ, inconspicuè subnodosâ, aliter lævigatâ; costâ umbonali obtusè angulatâ, natibus eminentibus ad apices compresso-angulatis, margaritâ albâ; dentibus cardinalibus magnis, compressis, crenulatis; lamellis lateralibus crassis, brevibus, remotis.*

LAMARCK'S UNIO. Shell thick, depressed, flattened in the middle, subequilateral, bluntly biangulated behind, arched below, yellow, everywhere adorned with green dotted somewhat chain-like interrupted rays (which are larger in front), indistinctly subnodose, else smooth; umbonal ridge bluntly angular, beaks prominent, compressed and angular at the tips, nacre white; primary teeth large, compressed, crenulated; lateral lamellæ thick, short, distant.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. x. (Obs. on Unio, vol. v. p. 22), pl. 17. f. 20.

U. Aberti, Conrad, teste Conrad.

Hab. Arkansas, America.

Between *irroratus* and *securis*. The lines of growth are very few, and the nodules are little more than rugosities disposed to run into small folds.

Species 499. (Copied from Lea.)

UNIO SAGITTIFORMIS. *Un. testâ tenui, depressâ, fere subæquilaterali, obliquè oblongo-elongatâ, posticè acutangulari, infernè anticè accliri, lævigatâ, subfuscâ, radiis virentibus latis undique profusè ornatâ, costâ umbonali subacutè angulatâ; areâ posticâ dorsali subplanâ, lirâ unicâ radiante instructâ; natibus parvis, prominulis, ad apices undulatis, margaritâ purpureâ; dentibus cardinalibus compressis, crenulatis, in utrâque valvulâ 2; lamellis lateralibus longis, rectiusculis.*

THE ARROW-HEAD UNIO. Shell thin, depressed, almost subequilateral, obliquely elongated-oblong, acutangular behind, rising in front below, smooth, brownish, everywhere profusely adorned with broad dark green rays; umbonal ridge somewhat acutely angulated; hinder dorsal area flattish, provided with a single radiating raised line; beaks small, a little projecting, undulated at the tips, nacre purple; primary teeth compressed, crenulated, two in each valve; lateral lamellæ long, straightish.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. x. (Obs. on Unio, vol. v. p. 33), pl. 22. f. 35.

Hab. Georgia, America.

Approaches *Fisherianus*, but is less elongated, and has broader rays. The species was described from two specimens only; the nacre will probably be found to vary.

Species 500. (Copied from Lea.)

UNIO PERSTRIATUS. *Un. testâ tenui, planulato-subcylindricâ, satis inæquilaterali, infernè subretusâ; epidermide fusco-luteâ concolore, striis multis imbricatis concentricè instructâ, aliter lævigatâ; costâ umbonali planâ et biangulatâ, areâ dorsali posticâ latâ et planulatâ; natibus vix eminentibus, ad apices minutè undulatis, margaritâ albâ, rarius purpurascente; dentibus cardinalibus parvis, obliquis; lamellis lateralibus longis, rectis, posticè incrassatis.*

THE THOROUGHLY STRIATED UNIO. Shell thin, flattened subcylindrical, moderately inequilateral, somewhat indented below; epidermis of a uniform yellow-brown, furnished with numerous concentric imbricated striæ, otherwise smooth; umbonal ridge flat and biangulated, hinder dorsal area broad and flattened; beaks scarcely raised, minutely undulated at the tips, nacre white, very rarely purplish; primary teeth small, oblique; lateral lamellæ long, straight, thickened posteriorly.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. x. (Obs. on Unio, vol. v. p. 11), pl. 12. f. 3.

Hab. S. Carolina.

The lines of growth are few.

Species 501. (Copied from Lea.)

UNIO SATUR. *Un. testâ crassâ, tumidâ, valde inæquilaterali, anticè angustissimâ (sed porrectâ), posticè subalatâ truncatâ et latè biangulatâ, lævi, politâ, fuscâ concolore (in junioribus, autem, olivaceâ), ligamento brevi crassoque; costâ umbonali versus nates*

magnas inflatas et latè rotundatas tumidâ et angulatâ, areâ dorsali posticâ planulatâ sulco obscuro latiusculo radiatâ, margaritâ albâ; dentibus cardinalibus magnis, obliquis, compressis, crenulatis, acuminatis; lamellis lateralibus longis, curvatis.

THE GLUTTED UNIO. Shell thick, swollen, very inequilateral, very narrowly rounded (yet peculiarly projecting) in front, somewhat winged truncated and broadly biangulated behind, smooth, polished, of a uniform dark brown (but olivaceous in the young); ligament short and thick; umbonal ridge tumid and angular towards the large swollen and broadly rounded beaks, hinder dorsal area flattened and rayed with a single obscure broadish furrow, nacre white; primary teeth large, slanting, compressed, crenulated, acuminated; lateral lamellæ long, curved.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. x. (Obs. on Unio, vol. v. p. 21), pl. 17. f. 19.

Hab. Louisiana, U. S. America.

Species 502. (Copied from Lea.)

UNIO PAZII. *Un. testâ crassiusculâ, valde inæquilaterali, lanceolatâ, anticè ventricosâ et latiore, posticè gradatim depressâ et curvato-cuneiformi, infernè anticè arcuatim acclivi, ad umbones tumidâ, lævi, olivaceâ, fere undique inconspicuè radiatâ, zonis incrementi 2 latis luteis remotisque ornatâ; natibus inflatis (sæpius erosis); costâ umbonali angulatâ; areâ posticâ dorsali valde angustâ, virente, liris inconspicuis biradiatâ; lunulâ bene impressâ, margaritâ albâ vel albo-cæruleseente; dentibus cardinalibus lamellatis, valde obliquis, corrugatis, in valvulâ dextrâ singulis; lamellis lateralibus productis, corrugatis.*

PAZ'S UNIO. Shell thickish, very inequilateral, lanceolate, ventricose and broader in front, gradually depressed and curved wedge-shaped behind, rising with an arched curve at the front ventral margin, swollen at the umboes, smooth, olivaceous, almost everywhere indistinctly rayed, adorned with two distant dirty yellow zones of increase; beaks inflated (usually eroded), umbonal ridge angular; hinder dorsal area very narrow, dark green, with two indistinct raised radiating lines; lunule well-marked, nacre white or bluish-white; primary teeth lamellar, very oblique, wrinkled, single in the right valve; lateral lamellæ produced, wrinkled.

LEA, Journ. Ac. Nat. Sc. ser. 2. vol. vi. (Obs. on Unio, vol. xi.), p. 61. pl. 21. f. 60.

Hab. Siam, China.

I suspect is only a form of *Ingallsianus*.

Species 503. (Copied from Lea.)

UNIO MOUHOTIANUS. *Un. testâ tenui, depressâ, oblongâ, inæquilaterali, infernè subretusâ, posticè rotundato-subbiangulatâ, fusco-lutescente concolore; costâ umbonali paululum elevatâ et rotundâ; areâ dorsali posticâ angustâ; natibus prominulis; margaritâ albidâ, valde iridescente; dentibus cardinalibus minimis, lobatis; lamellis lateralibus nullis.*

MOUHOT'S UNIO. Shell thin, depressed, oblong, inequilateral, somewhat indented below, rotundately subbiangular behind, of a uniform yellowish-brown; umbonal ridge very slightly raised and rounded; hinder dorsal area narrow; beaks slightly projecting; nacre whitish, very iridescent; cardinal teeth very small, lobed; no lateral lamellæ.

LEA (*Monocondylæa*), Journ. Ac. N. Sc. Philad. ser. 2. vol. vi. (Obs. on Unio, vol. xi.), p. 65. pl. 21. f. 62.

Hab. Laos Mountain, Cambodia.

Allied to *Bonellii*, but is less transverse, and less inequilateral. There are small obscure undulations on the umbonal ridge.

Species 504. (Copied from Lea.)

UNIO CONCAVUS. *Un. testâ subtenui, subventricosâ, subæquilaterali, ellipticâ, anticè satis latè rotundatâ, posticè subangulatâ, infernè arcuatâ, lævi, politâ, pallidè luteâ, radiis viridibus multis angustis pictâ; costâ umbonali inconspicuâ, areâ posticâ dorsali subangustâ; margaritâ albâ; dentibus cardinalibus compressis, in utrâque valvulâ singulis; lamellis lateralibus rectis, longiusculis.*

THE CONCAVE UNIO. Shell thinnish, subventricose, subequilateral, elliptic, rather broadly rounded in front, subangular behind, arched below, smooth, polished, pale yellow, painted with numerous narrow green rays; umbonal ridge inconspicuous, hinder dorsal area rather narrow; nacre white; primary teeth compressed, single in each valve; lateral lamellæ straight, longish.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. x. (Obs. on Unio, vol. v. p. 16), pl. 15. f. 11.

Hab. S. Carolina, America.

Described from a single adult example.

505 a.

506 a.

506 b.

507.

508.

509.

505 b.

Sowerby, del. et lith.

UNIO.

PLATE XCIII.

Species 505. (*a* and *b*, Mus. D'Orbigny in Mus. Brit.)

UNIO CHARRUANUS. *Un. testâ crassâ, ventricosâ, ovali-oblongâ (nonnunquam oblongo-elongatâ), infernè retusâ, posticè obtusè subbiangulatâ, æneâ, brunneo-viridescente, lævigatâ (nisi ad nates prominulas porcis obliquis subdivergentibus radiatas); costâ umbonali inconspicuâ, rotundatâ; lunulâ vix ullâ; margaritâ argenteâ; dentibus cardinalibus sublamellatis, antico in valvulâ sinistrâ cristato vel sagrinato, postico in dextrâ corrugato; lamellis lateralibus longis, rectiusculis, elevatis.*

THE CHARRUA UNIO. Shell thick, ventricose, oval-oblong (sometimes elongated-oblong), indented below, bluntly subbiangular behind, bronzed, greenish-brown, smooth, except at the slightly-projecting beaks, which are rayed with oblique subdivergent ridges; umbonal ridge inconspicuous, rounded; no distinct lunule; nacre silvery; primary teeth sublamellar, front one of the left valve shagreened or crested, hinder of the right valve corrugated; lateral lamellæ long, straightish, elevated.

D'ORBIGNY, Amér. Mérid. Moll. p. 606. pl. 71. f. 8 to 11.
U. faba, D'Orb.

Hab Banda Orientale, S. America.

The narrower form delineated is the *Rhuacoicus* of D'Orbigny.

Species 506. (Mus. D'Orbigny in Mus. Brit.)

UNIO HYLÆUS. *Un. testâ crassiusculâ, subventricosâ, satis inæquilaterali, subovali, posticè subbiangulatâ, olivaceo-ferrugineâ vel olivaceo-lutescente, fere undique porcis multis obliquis subcurvatis radiatâ; margine ventrali subretuso, anticè acclivi; costâ umbonali subangulatâ; natibus parvis, acutis, prominulis; margaritâ albidâ; dentibus cardinalibus subtrigonis, dente centrali verticali; lamellis lateralibus longis.*

THE RUSH UNIO. Shell thickish, subventricose, moderately inequilateral, suboval, subbiangulated behind, rusty or yellowish-olive, almost everywhere rayed by numerous oblique somewhat curved ridges; ventral edge somewhat retuse, rising in front; umbonal ridge subangular; beaks small, acute, a little prominent; nacre whitish; primary teeth subtriangular, the central one vertical; lateral lamellæ long.

D'ORBIGNY, Amér. Mérid. Moll. pl. 69. f. 8, 9.
U. Guaranianus, D'Orb.; do. f. 10, 11.

Hab. Bolivia, S. America.

An examination of the type-specimens manifests that Lea is quite right in regarding the two shells as mere forms of the same species. The differences are very slight, and do not quite correspond to the representative figures. The shell marked *Guaraniana* (506, *a*), has the ridges more nodulous, a rudimentary lunule, the nacre stained with olivaceous yellow in the extreme concavity, and the lateral lamellæ quite straight, instead of being slightly curved at their extremities. There are two primary teeth in each valve: the ridges do not quite extend to the ventral edge (especially behind), and are met at acute angles beyond the ridge by a few raised lines.

Species 507. (Mus. D'Orbigny in Mus. Brit.)

UNIO PSAMMOICUS. *Un. testâ validâ, tumidâ, valde obliquâ, in senioribus valde inæquilaterali, subrhombeâ (simili* Castaliæ), *ferrugineâ vel olivaceâ, concentricè striis sublamellosis et radiatim porcis obliquis remotis sculptâ, plicâ umbonali angulatâ; areâ posticâ dorsali concavâ, latiusculâ, nisi juxta nates valde eminentes sublævigatâ; lunulâ distinctâ; margaritâ albocærulescente, margine cardinali lato; dentibus cardinalibus in utrâque valvulâ 3 vel 4; lamellis lateralibus perbrevibus*, simplicibus, *obliquis, subcurvatis.*

THE PSAMMOIC UNIO. Shell strong, tumid, very oblique, very inequilateral in the old, subrhombic, (*Castalia*-shaped), ferruginous or olive, with concentric sublamellar striæ, and distant oblique radiating ridges; umbonal fold angular; hinder dorsal area concave, rather broad, not sculptured, except near the very prominent beaks; lunule distinct; nacre bluish-white, hinge-margin broad; primary teeth three or four in each valve; lateral lamellæ very short, *simple*, oblique, somewhat curved.

D'ORBIGNY, Amér. Mérid. Moll. p. 608. pl. 71. f. 4 to 7.

Hab. River Parana, Santa Fé.

With the aspect and almost the hinge of *Castalia*, but the animal of *Unio*.

Species 508. (Mus. D'Orbigny in Mus. Brit.)

UNIO SOLISIANUS. *Un. testâ crassiusculâ, subventricosâ, inæquilaterali, rotundato-ovali, olivaceâ concolore, concentricè rugatâ; margine dorsali antico incurvato, ad extremitatem angulato, lunulâ conspicuâ instructo; margine ventrali anticè acclivi; costâ umbonali humili; aread dorsali posticâ concavâ, perangustâ; natibus prominulis; margaritâ albo-cærulescente; dentibus cardinalibus binis, magnis, lamellatis, incurvatis, compressis; lamellis lateralibus tenuissimis, flexuosis.*

THE SOLISIAN UNIO. Shell thickish, subventricose, inequilateral, rounded-oval, of a uniform olive-green, concentrically wrinkle-ridged, front dorsal edge incurved, angulated at its extremity; lunule well marked; ventral margin rising anteriorly; umbonal ridge not raised; hinder dorsal area concave, very narrow; beaks slightly projecting; nacre bluish-white; primary teeth two, large, lamellar, incurved, compressed; lateral lamellæ very thin, flexuous.

D'ORBIGNY, Moll. Amér. Mérid. p. 604. pl. 69. f. 172–3.

Hab. Buenos Ayres.

The umboes exhibit a few slantingly divergent subradiating ridges, which in the suborbicular form delineated by D'Orbigny extend over the entire surface.

Species 509. (Mus. D'Orbigny in Mus. Brit.)

UNIO CORRIENTESENSIS. *Un. testâ validâ, ventricosâ, inæquilaterali, obliquè obovali, anticè brevi angustâ et porrectâ, sublævigatâ, olivaceo-lutescente vel virides-cente, sæpe lineis virentibus supra costam umbonalem inconspicuam rotundatam radiatâ; margine ligamentali arcuato, acclivi; margine ventrali subangulato, anticè præsertim acclivi; natibus eminentibus; lunulâ perangustâ, haud profundâ; margaritâ albo-cærules-cente; dentibus cardinalibus magnis, trigonis, tuber-culiformibus, in utráque valvulâ singulis; lamellis nullis.*

THE CORRIENTES UNIO. Shell strong, ventricose, inequilateral, obliquely oboval, short narrow but peculiarly projecting in front, smoothish, greenish or yellowish-olive, often with linear dark green rays beyond the inconspicuous rounded umbonal ridge; ligamental margin arched and elevated; ventral margin subangular, rising more especially in front; beaks prominent; lunule very narrow, not profound; nacre bluish-white; primary teeth large, trigonal, tubercular, single in each valve; no lamellæ.

D'ORBIGNY (*Monocondylæa*), Amér. Mérid. Moll. p. 613. pl. 68. f. 8, 9, 10.

Hab. Argentine Republic, S. America.

510.

511.

512.

513.

Sowerby. del. et. lith.

Vincent Brooks, Day & Son. Imp

UNIO.

PLATE XCIV.

Species 510. (Mus. Hanley.)

UNIO SCUTUM. *Un. testâ crassâ, inæqualiter subventricosâ, in medio subretusâ, anticè subdepressâ, valde inæquilaterali, oblongâ, posticè obliquè subbiangulatâ, piceâ concolore, sublævigatâ, margine ventrâli retuso et anticè acclivi, costâ umbonali elevatâ, areâ posticâ dorsali latâ et concaviusculâ, natibus vix prominulis, margaritâ albo-livescente; dentibus cardinalibus obliquis; lamellis lateralibus remotis.*

THE SHIELD UNIO. Shell thick, unequally subventricose, somewhat indented in the middle, somewhat depressed in front, very inequilateral, oblong, obliquely subbiangular behind, of a uniform pitch-colour, smoothish; ventral edge retuse, rising in front; umbonal ridge elevated, the space behind it broad and rather concave; beaks but little projecting, nacre livid whitish; primary teeth slanting, lateral lamellæ distant.

BENSON (teste Theobald).

Hab. Tenasserim.

The only individual known to us is in such bad condition that many of its characters are probably here omitted. If identical with another undetermined shell from Pegu (which is broader behind and not retuse below), the umboes are not sculptured, the epidermis is polished, the ridge is rounded and well defined, and the smooth space behind it rayed with one or two impressed lines, the primary teeth (two in each valve) are wrinkled and narrowly subtriangular.

Species 511. (Mus. Theobald.)

UNIO LAMELLATUS. *Un. testâ tenui, in medio subventricosâ, alibi subdepressâ, ovato-subrhomboideâ, inæquilaterali, posticè dilatatâ, lævi, nitidâ, olivaceâ concolore; margine dorsali utrinque subrecto; margine ventrali subarcuato, anticè valde acclivi; areâ posticâ dorsali valde concavâ; ligamento maximo, lunulâ nullâ, natibus haud etiam promin argaritâ albo-cærulescente; cardine utrinque lamellis lateralibus (ad extremitates deorsum curvatis) instructo.*

THE LAMELLATED UNIO. Shell thin, somewhat ventricose in the middle, elsewhere somewhat depressed, ovate-subrhomboidal, inequilateral, dilated behind, smooth, shining, uniform olive-coloured; dorsal edge nearly straight on either side, ventral edge subarcuated and much rising in front; hinder dorsal area very concave, ligament very large, no lunule, beaks not even a little projecting, nacre bluish white; hinge furnished on either side with lateral lamellæ, which are curved downwards at the extremities.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. vi. (Obs. on Unio, vol. ii. p. 19), pl. 6. f. 16.

Hab. Pegu (Theobald); Bengal (Lea).

A rare and remarkable shell, with a very peculiar hinge, quite different from the species erroneously so named in Plate LII.

Species 512. (Mus. Hanley.)

UNIO COCCINEUS. *Un. testâ crassâ, obliquè rotundato-subquadratâ, ad umbones eminentes ventricosâ, infernè subdepressâ, anticè perbrevi, olivaceo-fuscâ, nisi in junioribus haud radiatâ, vel lævigatâ, vel plicis obsoletis incrementi tantum sculptâ; margine ventrali subarcuato, anticè acclivi; natibus acutis, obliquè incurvatis; lunulâ conspicuâ; margaritâ sæpius pallidè rubra; margine cardinali latissimo, dentibus crassis verticalibus corrugatis, lamellisque obliquis subcurvatis instructo.*

THE SCARLET UNIO. Shell thick, obliquely rounded-subquadrate, ventricose at the prominent umboes, somewhat depressed below, very short in front, olive-brown, not rayed except in the young, either smooth, or only marked by the folds of increase; ventral edge subarcuated, rising in front; beaks acute, obliquely incurved; nacre usually pale pinkish-red; hinge-margin very broad, furnished with thick vertical wrinkled teeth and oblique and somewhat curved lamellæ.

HILDRETH, MSS. in Lea, Trans. Amer. Phil. Soc. ser. 2. vol. vi. (Obs. on Unio, vol. ii. p. 12), pl. 5. f. 12.

U. catillus, Conrad.

Hab. Ohio, N. America.

This is quite distinct from the shell erroneously so named in Plate XXII. The beaks are devoid of any peculiar sulpture.

Species 513. (Mus. Hanley.)

UNIO SALWENIANUS. *Un. testâ validâ, convexâ, ovali-subrhomboideâ, sæpius subobliquâ, valde inæquilaterali, infernè subarcuatâ, margine ligamentali convexo, fuscâ concolore, præcipuè lævi, in et supra costam umbonalem inconspicuam porcis divergentibus subremotis ornatâ, natibus eminentibus, margaritâ livido-carneâ; margine cardinali angustissimo, tuberculo unico in utráque valvulâ, transverso simplici arcuato lamelliformi, tantum instructo.*

THE SALWEN UNIO. Shell strong, convex, oval-subrhomboidal, usually somewhat slanting, very inequilateral, somewhat arched below, ligamental edge convex, of a uniform dark brown, for the most part smooth, but upon and beyond the inconspicuous umbonal ridge adorned with rather distant divergent ridges; beaks prominent, nacre livid flesh-colour; hinge-margin very narrow, only furnished with a transverse simple arched lamellar tubercle in each valve.

GOULD (*Anodon* and *Pseudodon*), Proc. Bost. Soc. N. H. vol. i. p. 160.

Hab. River Salwen, British Birmah.

A typical form of the subgenus *Pseudodon*.

514.

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518.

519.

520.

Sowerby, del. et lith.

Vincent Brooks Day & Son. Imp.

UNIO.

PLATE XCV.

Species 514. (Mus. Hanley.)

UNIO PARMA. *Un. testâ solidâ, ventricosâ, ovato-subcordatâ, valde inæquilaterali, olivaceo-fuscâ, haud radiatâ, ad umbones eminentes porcis angularibus brevibus, etiamque supernè ad costam umbonalem conspicuam costulis obliquis divergentibus ornatâ, alibi rudè concentricè subrugosâ vel sublævigatâ; margine ventrali subarcuato, anticè acclivi; areâ posticâ dorsali sulco levi radiante instructâ; margaritâ subalbidâ, supernè luteo-olivaceo sæpius fucatâ; dentibus cardinalibus validis subtrigonis, valde laciniatis; lamellis lateralibus longis, curvatis.*

THE BUCKLER UNIO. Shell solid, ventricose, ovate-subcordiform, very inequilateral, olive-brown, not rayed, adorned on the prominent umboes with short angular ridges, and upon the conspicuous umbonal ridge with divergent oblique riblets, elsewhere smoothish, or somewhat coarsely wrinkled concentrically; ventral edge subarcuated, rising in front; hinder dorsal area with a shallow radiating sulcus; nacre whitish, usually stained above with yellowish-olive; primary teeth strong, subtrigonal, much jagged; lateral lamellæ long, curved.

BENSON (teste Theobald).

Hab. Tennasserim, E. Indies.

The beaks are too eroded to describe. The primary teeth are so cloven that they might almost be described as three in each valve. There are traces of a large lunule.

Species 515. (Mus. Hanley.)

UNIO BONNEAUDII. *Un. testâ oblongo-elongatâ, crassiusculâ, magis minusve ventricosâ, subinæquilaterali, infernè retusâ, viridi-lutescente, in et supra costam umbonalem lineis virentibus triradiatâ et porcis angustis curvato-obliquis sculptâ, alibi rugis permultis divergentibus subangulatis (nonnunquam subobsoletis) sagrinato-radiatâ; natibus acutis, prominulis; lunulâ vel nullâ, vel perangustâ; margaritâ argenteâ; dentibus cardinalibus binis, sublamellatis, corrugatis; lamellis lateralibus subcurvatis.*

BONNEAUD'S UNIO. Shell elongated-oblong, thickish, more or less ventricose, somewhat inequilateral, indented below, yellow-green, on and beyond the umbonal ridge adorned with three dark-green rays and narrow oblique curved ridges, elsewhere with a shagreen-like radiation of numerous diverging subangular wrinkles (sometimes almost obsolete); beaks acute, somewhat prominent; lunule very narrow, if any; nacre silvery white; primary teeth two in each valve, sublamellar, wrinkled; lateral lamellæ somewhat curved.

EYDOUX, Mag. Zool. 1838, p. 10. pl. 118. f. 1.

Hab. Pusnad stream of the Pem Gunga, E. Indies (Theobald).

Eydoux's example has the central sculpture obsolete. *U. Shurtefflerianus*, of Lea, seems scarcely more than a variety.

Species 516. (Mus. Hanley.)

UNIO PUGIO. *Un. testâ haud magnâ, solidâ, planulato-ventricosâ, valde inæquilaterali, posticè acuminatâ aut rectè cuneiformi, zonis virentibus et luteis (sæpius angustioribus) pictâ, nonnunquam obsoletè radiatâ, anticè obscurius concentricè subsulcatâ, alibi lævigatâ, costâ umbonali angulatâ et suprà planulatâ, areâ dorsali posticâ angustâ et concaviusculâ, natibus vix prominulis, margaritâ pallidè rubro-aurantiâ; dentibus cardinalibus validis, subtrigonis, sagrinatis vel corrugatis, in utrâque valvulâ binis; lamellis lateralibus productis.*

THE DAGGER UNIO. Shell not large, solid, planulately ventricose, very inequilateral, peaked or straightly wedge-shaped behind, painted with zones of dark green and (usually narrower) yellow, at times indistinctly rayed, rather indistinctly subsulcated concentrically in front, elsewhere smooth; umbonal ridge angular, flattened above, hinder dorsal area narrow and slightly concave, beaks scarcely projecting, nacre of a pale reddish-orange; primary teeth strong, subtriangular, shagreened or wrinkled, two in each valve; lateral lamellæ produced.

BENSON, Annals Nat. Hist. n. s. vol. x. (1862).

Hab. E. Indies (rare).

Despite of many differences, this may prove identical with *Pazii*, yet the teeth, as represented by Lea, look very different. The hinder primary tooth of the right valve in

pugio is large, flat-topped, and viewed from below seems sublamellar. There are a few oblique raised wrinkles on or beyond the ridge.

Species 517. (Fig. *a*, *b*, Mus. Hanley.)

UNIO CREBRISTRIATUS. *Un. testâ crassâ, depressiusculâ, valde inæquilaterali, subrhomboideâ, ovali vel obovali, concentricè rugosâ; rugis supernè liræformibus, confertis, sæpius interruptis, costâ umbonali luteo-fuscâ, latâ et planulatâ (etiamque areâ posticâ dorsali) costulis obliquis arcuatis supernè confertim ornatâ, natibus acutis, prominulis, lunulâ perparvâ, angustissimâque; margaritâ pallidè luteo-aurantiâ; cardine dente magno trigono simplici in utrâque valvulâ instructo; lamellis nullis.*

THE MANY-STRIATED UNIO. Shell thick, rather depressed, very inequilateral, subrhombic, oval, or oboval, with concentric wrinkles which are close-set, raised, and usually interrupted, on the upper part of the disks yellow-brown; both the broad and flattened umbonal ridge, and the area behind it, adorned above with close-set arched and slanting narrow ridges; beaks acute and somewhat raised, lunule very small and very narrow, nacre orange-yellow; hinge solely consisting of a single big simple triangular tooth in each valve.

ANTHONY (*Monocondylæa*), Amer. Journ. Conch. 1865, pl. 18. f. 1.

Hab. British Birmah (Theobald).

Although Anthony has not indicated the source of the many new species he received from Pegu and the adjacent territory, the daring energy of the discoverer of this shell is well known to erpetologists. Conrad has proposed the name *Trigonodon* as a subgeneric epithet for it.

Species 518. (Mus. Hanley.)

UNIO VONDEMBUSCHII. *Un. testâ inæqualiter subventricosâ, crassiusculâ, inæquilaterali, subovatâ, posticè dilatatâ, infernè haud retusâ, lævigatâ, brunneâ concolore; costâ umbonali latâ, elevatâ, posticè angulatâ; areâ posticâ latiore, concaviusculâ, et rugis elevatis paucis obliquis brevibus inconspicuè instructâ; margine dorsali antico brevissimo, incurvato; natibus prominulis, margaritâ albidâ, seu albo-livescente, supernè olivaceo-flavescente infucatâ; tuberculo dentiformi in utrâque valvulâ; lamellis nullis.*

VONDEMBUSCH'S UNIO. Shell unequally subventricose, thickish, inequilateral, subovate, dilated behind, not retuse below, smooth, of a uniform brown; umbonal ridge broad, elevated, angulated behind; posterior dorsal area very broad, rather concave, furnished with a few short oblique raised wrinkles; front dorsal edge extremely short and incurved, beaks a little prominent; nacre whitish or livid white, stained above with yellowish-olive; a single tooth-like tubercle in each valve; no lamellæ.

LEA, Trans. Amer. Phil. Soc. ser. 2. vol. viii. (Obs. on Unio, vol. iii. p. 60), pl. 18. f. 39.

Alasmodonta crispata and *Zollingeri*, Mousson.

Hab. Birmah (Theobald); Java.

The raised wrinkles merely run between the ridge and an obscurely elevated radiating line.

Species 519. (Mus. Hanley.)

UNIO PEGUENSIS. *Un. testâ subtenui, subventricosâ, oblongâ (nonnunquam abbreviato-oblongâ), satis inæquilaterali, luteo-viridescente, concentricè (et anticè præsertim) confertim rugoso-striatâ; margine ventrali incurvato et anticè acclivi; areâ posticâ dorsali latâ concaviusculâ, rugis elevatis obliquis permultis supernè ornatâ; umbonibus prominulis; margaritâ pallidè rubro-aurantiâ; dentibus cardinalibus lamellaribus, corrugatis; lamellis lateralibus rectis, longis.*

THE PEGUAN UNIO. Shell thinnish, subventricose, oblong (sometimes shortened), moderately inequilateral, greenish-dull-yellow, with close-set concentric rugose striæ (espedially in front); ventral edge incurved, rising in front; hinder dorsal area broad, rather concave, adorned above with very many slanting raised wrinkles; umboes rather prominent; nacre pale salmon-coloured; primary teeth lamellar, wrinkled; lateral lamellæ straight and long.

ANTHONY, Amer. Journ. Conch. 1865, p. 351. pl. 25. f. 2.

Hab. Pegu (Theobald).

The umboes seem always eroded in the adult, but, judging from fragmentary portions, are probably adorned with either grains or broken raised lines. Some individuals are green upon, or beyond, the inconspicuous umbonal fold. The left valve, besides its lamellar teeth, has a more or less developed additional one just under the beaks.

Species 520. (Mus. Hanley.)

UNIO CRASSUS. *Un. testâ solidâ, subventricosâ, ovatâ, inæquilaterali, olivaceo-luteâ, tenebroso-viridi undique latè radiatâ, sublævigatâ, rugis incrementi tantum sculptâ; margine ventrali subarcuato, anticè acclivi; costâ umbonali obtusè subangulatâ; areâ posticâ dorsali satis angustâ; umbonibus erosis, satis eminentibus; lunulâ magnâ; margaritâ albâ; dentibus cardinalibus erectis* (2 *et* 3)*, trigonis; lamellis lateralibus validis, obliquis, subrectis.*

THE THICK UNIO. Shell solid, ventricose, ovate, inequilateral, olivaceous-yellow, everywhere broadly rayed with dusky green, smoothish, merely marked by the wrinkles of increase; ventral edge somewhat arcuated, rising in front; umbonal ridge bluntly subangular; hinder dorsal area moderately narrow; umbos eroded, moderately projecting; lunule large; nacre white; primary teeth erect (two and three), triangular; lateral lamellæ strong, oblique, straightish.

SAY, Nicholson's Encyclop. (ed. Amer.), Shells, pl. 1. f. 8. *Mya gravis*, Wood.

Hab. N. America.

As it would be almost impossible to detect this, the ordinary form, in our previous illustration, it has been deemed advisable to repeat the species. The previous reference to the 'American Conchology' was erroneous, and, like most of Say's earlier species, several were included by him under the same name.

521.

514.a.

514.b.

523.

524.

522.

525.

Sowerby. del et lith.

Vincent Brooks, Day & Son, Imp.

UNIO.

PLATE XCVI.

Species 521. (Mus. D'Orbigny in Mus. Brit.)

UNIO FOSSICULIFERUS. *Un. testâ validâ, ventricosâ, valde inæquilaterali, obovatâ, anticè perangustâ, sublævigatâ, olivaceo-lutescente (in junioribus lineis virentibus in et supra costam umbonalem radiatâ); margine dorsali antico brevi, incurvato; margine ventrali arcuato, anticè acclivi; areâ posticâ dorsali latiusculâ, concavâ, angulo umbonali radiante anticè definitâ; lunulâ profundâ, umbonibus eminentibus, margaritâ argenteâ iridescente maculis purpureis fucatâ; cardine dente tuberculiformi unico in utrâque valvulâ instructo; lamellis nullis.*

THE PIT-BEARING UNIO. Shell strong, ventricose, very inequilateral, obovate, very narrow in front, smoothish, yellowish-olive (in the young rayed with dark green lines upon and beyond the ridge); front dorsal edge short, incurved; ventral edge arched, rising in front; hinder dorsal area broadish, concave, defined in front by the radiating umbonal angle; lunule deep, umboes projecting; nacre silvery, iridescent, with purple stains; hinge with a single tubercular tooth in each valve; no lamellæ.

D'ORBIGNY (*Monocondylæa*), Amer. Mérid. Moll. p. 614. pl. 80. f. 5, 6, 7.

Hab. Argentine Republic, S. America.

Species 522. (Copied from Journ. Conch.)

UNIO TIENTSINENSIS. *Un. testâ crassâ, tumidâ, obliquè ovato-ellipticâ, anticè brevissimâ, concentricè rugoso-striatâ, ad umbones tuberculis validis confluentibus ornatâ, (sub epidermide tenui rubiginosâ) viridi, lunulâ nullâ, umbonibus tumidis prominulis approximatisque, margaritâ albâ et lutescente; dentibus cardinalibus validis, crenulatis; lamellis lateralibus longis.*

THE TIENTSIN UNIO. Shell thick, swollen, obliquely ovate-elliptic, very short in front, concentrically wrinkle-striated, adorned at the umboes with strong confluent tubercles, green under the thin ruddy epidermis; no lunule; umboes tumid, rather projecting, approximate; nacre yellowish and white; primary teeth strong, crenulate; lateral lamellæ elongated.

CROSSE and DEBEAUX, Journ. Conch. 1863 (vol. xi.), p. 257. pl. 10. f. 1.

Hab. River Peiho at Tient-tsin, N. China.

Species 523. (Copied from Hupé.)

UNIO D'ORBIGNIANUS. *Un. testâ crassâ, depressâ, æquilaterali, irregulariter subquadratâ, anticè rotundatâ et obliquè porrectâ, posticè obliquè subtruncatâ, sublævigatâ, fusco-lutescente concolore, sulco profundo pone costam umbonalem instructâ; margine ligamentali perbrevi; margine ventrali anticè arcuato, posticè subretusè acclivi; areâ posticâ dorsali angustâ; natibus rotundis, eminentibus; margaritâ albido-cærulescente; dentibus anticis validis, laciniatis seu corrugatis; lamellis posticis striatis.*

D'ORBIGNY'S UNIO. Shell thick, depressed, equilateral, irregularly squarish, rounded and obliquely projecting in front, obliquely subtruncated behind, smoothish, of a uniform yellowish-brown, with a deep furrow behind the umbonal ridge; ligamental edge very short; ventral margin arched in front, subretusely rising behind; hinder dorsal area narrow; beaks rounded and prominent; nacre bluish-white; hinge-margin broad and much curved; front teeth strong, jagged or wrinkled; hinder lamellæ striated.

HUPÉ and DEVILLE, Mag. Zool. 1850, pl. 16. f. 1; Anim. l'Amér. Sud (Exped. Castelnau), Moll. p. 83. pl. 17. f. 1.

Hab. Upper Amazon.

Species 524. (Mus. D'Orbigny in Mus. Brit.)

UNIO GUARAYANA. *Un. testâ haud magnâ, crassâ, ventricosâ, valde inæquilaterali, rotundato-ovali, fuscâ concolore, striis lamellaribus concentricè rugulosâ, infernè arcuatâ; latere postico plicis 2 radiantibus (quarum superior est angustior) porcato, ad extremitatem rotundato; natibus valde eminentibus, contortis; lunulâ nullâ; margaritâ albidâ, nonnunquam rubro pallidè tinctâ; margine cardinali lato; tuberculo cardinali in utrâque valvulâ unico, compresso, obtusissimo; lamellis lateralibus nullis.*

The Guarayos Unio. Shell not large, thick, ventricose, very inequilateral, rounded-oval, of a uniform brown, wrinkled by concentric lamellar striæ, arched below; hinder side ridged by two radiating folds, of which the upper is the narrower, rounded at its extremity; beaks very prominent, twisted; no lunule; nacre whitish or tinged with pale red; hinge-margin broad; in each valve a single cardinal tubercle, which is compressed and very blunt; no lateral lamellæ.

D'Orbigny (*Monocondylæa*), Moll. Amér. Mérid. p. 614. pl. 68. f. 4 to 7.

Hab. Guarayos, Bolivia.

There are two undulated sulci between the peculiar folds.

Species 525. (Mus. Brit.)

Unio Churchilleanus. *Un. testâ tenui, depressâ (ad umbones subventricosâ), obliquè obovatâ, anticè perbrevi et maximè coarctatâ, posticè dilatatâ et subalatâ, sublævigatâ, luteo-viridi-cinereâ, radiis virentibus paucis tantum supra costam umbonalem subhumilem sparsim ornatâ; margine ventrali anticè abruptè et subrectè acclivi, posticè sæpius arcuato; natibus parvis, acutis, inclinatis, haud eminentibus; margaritâ argenteâ, aliquando paululum subrosea; dente cardinali parvo, unico, compresso, trigono; lamellis lateralibus nullis.*

Churchill's Unio. Shell depressed (at the umboes subventricose), obliquely obovate, very short and peculiarly contracted in front, dilated and somewhat winged behind, nearly smooth, of an ashy greenish-yellow, merely adorned here and there with a few dark green rays beyond the scarcely elevated umbonal ridge; ventral edge rising abruptly and somewhat straightly in front, usually arcuated behind; beaks small, acute, inclined, not prominent; nacre silvery sometimes slightly pink; cardinal tooth small, single, compressed, triangular; no lateral lamellæ.

Bourgignat, Rev. et Mag. Zool. 1857 (apart as Amén. Malac. p. 35. pl. 2. f. 1 to 4).

Hab. Anatolia.

Almost a *Monocondylæa*.

UNIO.

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biangulatus, *Lea*.....	LXXX.	421
bicælatus, *Reeve*	XXVI.	130
Bigbyensis, *Lea*	XLI.	227
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camelopardalis, *Lea*	XLII.	233
camelus, *Lea*	LV.	283
camptodon, *Say*	LXX.	356
capax, *Green*	LII.	274
caperatus, *Lea*.....	V.	19
Capigliolo, *Payraudeau*	LXXV.	392
capillaris, *Lea*.....	XV.	64
capsæformis, *Lea*.....	XVII.	79
carbonarius, Lea.....	LXXV.	387
carinifera, Lamarck	LXVIII.	346
Carinthiacus, *Ziegler*	XXX.	157
cariosus, *Say*	LVIII.	294
catillus, Conrad	XXII.	104
cerinus, Conrad	LXXXVII.	468

	Plate.	Species.
Charruanus, *D'Orbigny*	XCIII.	505
Chattanoogoensis, *Lea*	XVI.	69
Chilensis. *Gray*	LV.	286
Chiloensis, *Philippi*	XXIX.	150
Churchilleanus, *Bourgignat*	XCVI.	525
cicatricosus, *Say*	VIII., 31, and XIII.	50
cinnamomicus, *Lea*	LXXXIII.	436
circulus, *Lea*	XXVII.	135
Clairbornensis, *Lea*	LXX.	357
clava, *Lamarck*	LXIX.	354
coarctatus, *Lamarck*	XXXIV.	178
coccineus, Reeve	XXII.	104
coccineus, Hildreth	XCIV.	512
Cocoduensis, "*White*" *Sowerby*	XXIV.	117
cœlatus, *Conrad*	II.	7
cœruleus, *Lea*	XLII.	230
collinus, *Conrad*	XLIX.	263
complanatus (*Alasmodonta*), *Barnes*	L.	266
complanatus, Lea	LXVIII.	346
compressa (Alasmodonta), Menke	LXXIX.	414
concavus, *Lea*	XCII.	504
concestator, *Lea*	XXVI.	128
concolor, *Lea*	LXXXIII.	440
confertus, *Lea*	XXXV.	185
confragosus, *Say*	LX.	299
congaræus, *Lea*	LIX.	296
Connasaughensis, *Lea*	LXXXVIII.	474
Conradicus, *Lea*	LIV.	278
consanguineus, *Lea*	LXXVIII.	409
constrictus, *Conrad*	LXXXVII.	464
contradens, *Lea*	XXIX.	149
Cooperianus, *Lea*	VIII.	30
cordatus, *Rafinesque*	LXXIII.	376
corium, *Reeve*	X.	39
cornutus, Barnes	V.	23
Corrianus, *Lea*	LXXVII.	401
Corrientensis, *D'Orbigny*	XCIII.	509
corrugatus (*Mya*), *Chemnitz*	LXXI.	360
corvus, *Lea*	LXXVIII.	411
costatus, *Rafinesque*	IV.	16
costulatus (*Monocondylæa*), *Mericand*	LXXXVIII.	470
Couchianus, *Lea*	LXXXI.	429
crassidens, *Lamarck*	LXII.	312
crassus, Retz	XXII.	98
crassus, *Say*	XL., 220, and XCV.	520
crebristriatus (*Monocondylæa*), *Anthony*	XCV.	517
crispatus, Gould	LXXXVI.	457
crispisulcatus, *Benson*	XLIX.	262
crocatus, Lea	LXIII.	317
crocodilorum, *Morelet*	X.	37
cucumoides, *Lea*	XX.	89
Cumberlandianus, *Lea*	XXXVI.	197
Cumingii, *Lea*	XLIX.	264
cuneatus, Rafinesque	XVI.	73
cuneatus, Jacquemin	LXXXVI.	461
cuneolus, *Lea*	XXIII.	107
cuprinus, *Lea*	LXVI.	336
Curreyanus, *Lea*	LXIII.	317
curvirostris, Dupuy	XXV.	123
cylindricus, *Say*	LX.	300
cyphius, *Rafinesque*	VIII.	28
dactylus, Morelet	XXV.	123
Dariensis, *Lea*	XCI.	494
decisus, *Lea*	XVI.	71
declivis, *Conrad*	LXX.	356
decoratus, *Lea*	XCI.	496
decumbens, *Lea*	LXXXII.	432
decurvatus, *Rossmässler*	LVI.	284
dehiscens, *Say*	LXXV.	393
delodontus, *Lamarck*	LVII.	288
delphinus, *Gruner*	XLIII.	238
delphinulus, *Morelet*	XLIII.	237
deltoideus, *Lea*	LXXVI.	305
Demerarensis, *Lea*	XXII.	99
Dembea, *Reeve*	XXIX.	153
depressa (Mya), Donovan	XXV.	124
depressa, Rafinesque	LXI.	304
depressus, Pfeiffer	LXXIX.	414
depressus, *Lamarck*	XVIII.	81
Deshayesii, Michaud	XXV.	123
deviatus, *Anthony*	XV.	61
digitiformis, *Sowerby*	LXV.	333
dilatatus, Conrad	LXXIII.	379
diminutus, *Lea*	XXVIII.	140
discrepans, *Lea*	XXXIV.	176
discoideus, *Sowerby*	LIII.	275
discus, *Lea*	LXII.	310
dolabelloides, *Lea*	XXXVII.	205
dolabræformis, *Lea*	LIX.	298
dolosus, *Lea*	XLI.	228
Dombeianus, Valenciennes	II.	5
Donaciformis, *Lea*	XXXIX.	214
D'Orbignianus, *Deville and Hupé*	XCVI.	523
Dorfeuillianus, *Lea*	X.	38
Douglasiæ, *Gray*	XXXVIII.	207
Downei, *Lea*	LXVIII.	350

	Plate.	Species.
dromas, *Lea*	VIII.	29
Dunkerianus, *Lea*	XC.	485
Duttonianus, *Lea*	XCI.	492
ebenus, *Lea*	LXVI.	334
Edgarianus, *Lea*	XV.	65
electrinus, *Reeve*	XXV.	121
elegans, *Lea*	LXXIV.	380
ellipsis, *Lea*	LXXXI.	424
ellipticus, *Lea*	LXXIV.	382
ellipticus, Barnes	XLI.	220
elongatus, Lamarck	LXXVI.	397
elongatulus, *Von Mühlfeld*	LXXXV.	451
elongata (Mya), Wood	XXVII.	139
emarginatus, *Lea*	LXVII.	342
Evansii, *Adams*	LVI.	285
excavatus, Lea	LXXVII.	403
exiguus, *Reeve*	XXXVIII.	208
eximius, *Lea*	LXXXIX.	481
faba, D'Orbigny	XCIII.	505
fabalis, *Lea*	XXXVI.	196
fabula, *Lea*	LXXVI.	394
falcata (*Margaritana*), *Gould*	LXXV.	390
fallax, *Lea*	LXXX.	418
famelicus, *Gould*	LXXV.	391
fasciolus, Rafinesque	LXX.	306
favidens, *Benson*	XXVI.	131
favosus, *Lea*	XC.	488
fibuloides, *Lea*	XLI.	223
Fisherianus, *Lea*	XXIV.	113
flavus, Rafinesque	XXVII.	136
flexuosus, *Rafinesque*	VI., 22, and XIII.	53
fluctiger, *Lea*	XLII.	229
foliatus, Hildreth	VI.	22
folliculatus, *Lea*	XCI.	493
Fontaineanus, *D'Orbigny*	LXXXVII.	466
Forbesianus, *Lea*	LXXI.	361
Foremanianus, *Lea*	XXXVII.	202
formosus, *Lea*	LXVII.	340
Forsheyi, *Lea*	VI.	21
fossiculiferus (*Monocondylæa*), *D'Orbigny*	XCVI.	521
fragilis, *Swainson*	XXX.	155
fragilis, Swainson	XXXIX.	215
fragosus, *Conrad*	VII., 27, and I.	2
fuliginosus, *Lea*	LXVIII.	346
fuligo, *Reeve*	XXX.	159
fulvus, *Lea*	LXXXIX.	483
funebralis, *Lea*	LVII.	290
fuscatus, *Lea*	XXI.	95
Gassiesii? Philippi	XXIX.	150
Georgina, Lamarck	LXVIII.	346
Gesnerii, *Lea*	LXXXIV.	446
gibber, *Lea*	XL.	219
gibbosus, *Barnes*	LXXIII.	379
gibbosus, Rafinesque	XI.	41
gigas, *Swainson*	LVI.	287
glaber, *Lea*	LXXXV.	452
glabrata, Lamarck	LXVIII.	346
glabratus, Sowerby	LXXVI.	399
glans, *Lea*	XXXVI.	190
glebulus, *Say*	LXXIV.	384
glebulus, Reeve	XXIII.	106
globosa, Lea	XXVI.	190
gracilis, *Barnes*	XXXIX.	215
grandidens, Lea	LXXXIII.	439
graniferus, *Lea*	IX.	34
granosus, Schumacher	XXII.	98
gratus, *Lea*	LXXXIV.	444
gravidus, *Lea*	LII.	271
gravis (Mya), Wood	XL.	220
Grayanus, *Lea*	XXV.	119
Greenii, *Conrad*	XLVII.	253
Griffithianus, *Lea*	LXXXIX.	479
Guaranianus (*Monocondylæa*), *D'Orbigny*	XCVI.	524
Guaranianus, D'Orbigny	XCIII.	506
gubernaculum, *Reeve*	XXVIII.	146
Gundlachi, *Dunker*	XLVI.	248
Hainesianus, *Lea*	XLVII.	254
Halcianus, *Lea*	XXIV.	116
Hanleyanus, *Lea*	XLVI.	249
Hanleyanus, Reeve	XVII.	76
Haysianus, *Lea*	XV.	62
Hazlehurstianus, *Lea*	XXXV.	188
Heermannii, *Lea*	LXXXIII.	441
Hembeli, *Conrad*	XXXIII.	172
heros, *Say*	II.	8
heterodon, *Lea*	XXXV.	184
hians, Valenciennes	LXXVI.	399
Higginsii, *Lea*	LXXXII.	431
Hildrethianus, *Lea*	XXXVI.	192
hippopæus, *Lea*	XI.	40
Hochstetteri, *Dunker*	LXXXVI.	463
Holstonensis, *Lea*	LXXVI.	398
Hopetonensis, *Lea*	LXVIII.	349
Housei, *Lea*	XLVIII.	260
Houstonensis, *Lea*	LXXXI.	424
Hydianus, *Reeve*, as of *Lea*	XXXVII.	203

	Plate.	Species.
hylæus, *D'Orbigny*	XCIII.	506
icterinus, Conrad	LXXXIX.	483
incrassatus, *Lea*	XXVI.	127
incurrus, Lea	XXII.	98
Indicus, *Sowerby*	XL.	222
inflatus, Hecart	XXV.	124
inflatus, *Lea*	XLV.	246
inflatus, Barnes	LVII.	293
infucatus, *Conrad*	XL.	221
Ingallsianus, *Lea*	XXVI.	126
inornatus, *Lea*	XXIX.	147
intermedius, *Conrad*	XIII.	48
interruptus, *Rafinesque*	XIV.	56
interruptus, Say	V.	17
involutus, *Benson*	XXXIV.	177
Iris, *Lea*	XXIX.	148
irroratus, *Lea*	XII.	44
Isocardioides, *Lea*	XC.	484
Japanensis, *Lea*	LXXX.	420
Javanus, *Lea*	XC.	489
Jayensis, *Lea*	LX., 301, and LXVIII.	343
jejunus, Sowerby (not Lea)	LXXXVIII.	347
Kirtlandianus, *Lea*	LXXVII.	402
Kleinianus, *Lea*	II.	6
lachrymosus, *Lea*	IX.	33
lacteolus, *Lea*	LVII.	288
lævissimus, *Lea*	XLVI.	250
Lamarckianus, *Lea*	XCII.	495
lamellatus, *Lea*	XCIV.	511
lamellatus, Sowerby	LII.	172
Lampreyanus, *Baird and Adams*	LXXXVII.	469
lanceolatus, *Lea*	XLVII.	236
Laosensis, *Lea*	XLVII.	256
latissimus, *Sowerby*	LXVI.	337
Layardi, *Lea*	XXXIII.	111
Lazarus, *Lea*	LXVIII.	348
Lecai, *Gray*	IX.	1
Lecontianus, *Lea*	XXXIII.	173
lenior, *Lea*	XVII.	75
lens, *Lea*	XXVII., 134, and XXXVII.	200
leptodon, *Conrad*	XLVII.	257
lienosus, *Conrad*	LXXV.	388
lienosus, Reeve	XXXII.	166
ligamentinus, *Lamarck*	XL.	220
ligamentinus, Deshayes	LXX.	306
limosus, Nillson	XXV.	123
Lindsleyi, *Lea*	XLII.	233 *b*
lineatus, *Lea*	LXI.	309
lithophagus, Ziegler	LXXV.	389
littoralis, *Draparnaud*	XXII.	98
longirostris, Ziegler	XXV.	123
lugubris, *Lea*	LXXX.	423
lugubris, Say	XXIV.	115
luteolus, *Lamarck*	LVIII., 293, and LXI.	306
lutulentus, *Gould*	XXV.	122
Maconensis, Lea	LX.	301
macrodon, *Lea*	LXXXIII.	437
magnificus, *Lea*	LVII.	289
margaritiferus, *Linnæus*	LXIV.	325
marginalis, *Lamarck*	LIX.	297
marginatus, *Say*	LI.	267
Medellinus, *Lea*	XXXIII.	171
medius, *Lea*	XVII.	77
melleus, *Lea*	XX.	92
melinus, *Conrad*	LXXXVII.	467
membranaceus, Maton	LXXIV.	381
Menkeanus, *Lea*	XXVIII.	140
Menziesii, *Gray*	XXIX.	152
merdiger, Walsh	XXVIII.	145
metanever, *Rafinesque*	VII.	25
Mexicanus, *Philippi*	LV.	281
micans, *Lea*	XXXV.	182
Michaudianus, Desmoulins	XXV.	124
Minuanus, *D'Orbigny*	XCI.	497
Mississippiensis, *Conrad*	XIX.	85
modioliformis, Say	LXIX.	82
Moretonicus, *Reeve*	XXIV.	118
Mortoni, *Conrad*	III.	10
Mouhotianus, *Lea*	XCII.	503
mucidus, Morelet	XXV.	123
Mühlfeldianus, *Lea*	XXXVII.	211
multiplicatus, Lea	II.	9
multiradiatus, *Lea*	LXX.	306
multiradiatus, Sowerby	LXI.	306
multistriatus, *Lea*	LXXXV.	455
mundus, Reeve (not Lea)	XVI.	72
Murchisonianus, Lea	XXXVIII.	207
mutabilis, *Lea*	XXIV.	112
mutatus, Mousson	XC.	489
Myersianus, *Lea*	L.	265
Mytiloides, (Uniopsis), Swainson	LXXVI.	396
nana, Lamarck	XXII.	98
Napeanensis, *Conrad*	XXIII.	110
Nashvilleanus, *Lea*	XXX.	158
nasutus, *Say*	XX.	94
Natalensis, *Lea*	LXXI., 362, and XCVI.	362

	Plate.	Species.
naviculoides, *Lea*	LX.	301
naviformis, Lamarck	LX.	300
navioliformis, *Lea*	XXIV.	114
nebulosus, Conrad	XXIX.	148
negatus, *Lea*	XXXII.	165
neglectus, *Lea*	LXV.	329
nexus, Say	XIV.	57
Nicklinianus, *Lea*	LIII.	276
niger, *Conrad*	LXXVIII.	408
Niloticus, *Caillaud*	LXXXIII.	374
nitens, *Lea*	XXVIII.	144
nocturnus, Lea	LVII.	290
nodosus, Barnes	VII.	25
nodiferus, Conrad	XIII.	47
nodulatus, *Rafinesque*	XIII.	51
nodulosus (*Mya*), *Wood*	LXXXIII.	439
nodulosus, Reeve	IX.	32
Novi-Eboraci, *Lea*	XXXVIII.	206
nucleopsis, *Conrad*	XVI.	68
nux-Persica, *Dunker*	LXXIII.	373
Nyassensis, *Lea*	XLI.	224
obesus, *Lea*	XVIII., 84, and XXXVIII.	212
obliquiradiatus, *Reeve*	XXIX.	151
obtusa, Deshayes	LXXI.	363
obtusus, *Lea*	XXVI.	129
occatus, *Lea*	LXXIX.	412
ochraceus, *Say*	LXIII.	317
olivaceus, *Lea*	XXXVI.	195
orbiculatus, *Hildreth*	XLIV.	239
Orbignianus, *Deville and Hupé*	XCVI.	523
Oregonensis, *Lea*	LXXIV.	383
oriens, *Lea*	LXIII.	314
Orientalis, *Lea*	XCI.	491
ornatus, *Conrad*	XXXI.	162
Osbeckii, *Philippi*	LXIX.	353
ovalis, Retz	XXV.	124
ovata (Mysca), Turton	XXV.	124
ovatus, *Say*	XXXI.	164
Paraguayanus, *D'Orbigny*	LII.	273
parallelopipedon, *Lea*	LXXXIX.	478
Paranensis, *Lea*	LI.	268
parma, *Benson*	XCV.	514
Parreysii, Von Busch	LXXIII.	374
parvus, *Barnes*	XXXV.	186
Patagonicus, *D'Orbigny*	XX.	93
Pazii, *Lea*	XCII.	502
pectorosus, Conrad	LXIX.	82
Peguensis, *Anthony*	XCV.	519
pellis-serpentis, *Dunker*	LXXXVI.	457
pellucidus, *Lea*	XXXV.	183
penitus, *Conrad*	XIV.	55
peræformis, *Lea*	LXXXIV.	443
percoarctatus	LIV.	277
perdix, *Lea*	LXIX.	82
perdix, Reeve	XVIII.	82
Pearlensis, *Conrad*	XI.	42
pernodosus, *Lea*	XII.	46
perovalis, *Conrad*	XXXVIII.	209
perplexus, *Lea*	XI.	41
perplicatus, Reeve	IX.	35
personatus, *Say*	XV.	64
perstriatus, *Lea*	XCII.	500
persulcatus, Lea	XLVI.	248
Peruvianus, Lamarck	II.	5
phaseolus, *Hildreth*	LXXIII.	378
Phillippii, Dupuy	XXV.	123
Phillippsii, *Conrad*	IV.	15
Pianensis, Farines	XXII.	98
pictorum (*Mya*), *Linnæus*	XXV.	123
pictus, *Lea*	LXIII.	316
piger, *Lea*	LXXIV.	445
pilaris, *Lea*	XXVII.	138
pileus, *Lea*	XIV.	59
Plantii, *Lea*	LXXXVIII.	473
planulatus, Lea	LXXIII.	378
platyrrhynchus, *Rossmässler*	XXX.	154
platyrrhynchoideus, *Dupuy*	LXX.	358
plenus, *Lea*	LXI.	305
plexus, Conrad	LXXV.	387
plicatulus, *Lea*	XXII.	102
plicatus, *Lesseur*	II.	5
pliciferus, *Lea*	LXXV.	387
pliciferus, Reeve	X.	37
plumbea (Chama), Chemnitz	LXXXIII.	439
Poeyanus, *Lea*	XC.	486
politus, Say	XXXII.	168
ponderosus, Spitz	XXV.	123
Popei, *Lea*	LXXXI.	430
Postellii, *Lea*	XLVII.	255
Poulsoni, *Conrad*	LI.	270
Powellii, *Lea*	LXX.	359
prælongus, *Barnes*	XIX.	85
prasinus, Reeve	VII.	26
Prevostianus, *Lea*	LXIII.	315
productus, Mousson	XCI.	491
propinquus, *Lea*	LXXIX.	417
psammactinus, Bronn	LXXIV.	382
psammoicus, *D'Orbigny*	XCIII.	507
pudicus, *Lea*	LXXXI.	427

	Plate.	Species.
pugio, *Benson*	XCV.	516
pullatus, *Lea*	LXVI.	335
pumilis, Ziegler	LXXIII.	374
pumilis, *Lea*	XXXVI.	198
purpurascens, *Lamarck*	LXVIII.	346
purpuratus, *Lamarck*	XXIV.	115
purpureus, *Say*	LXVIII.	346
pustulata (Theliderma), Swainson	I.	4
pustulosus, Lea	XII.	43
pyramidatus, *Lea*	LXIV.	323
quadrulus, *Rafinesque*	VI.	24
radiata (Uniopsis), Swainson	LXXVI.	396
radiatus (*Mya*), *Gmelin*	XXVII.	139
Rangianus, *Lea*	XIV.	54
rariplicata, Lamarck	II.	5
ravistellus, *Morelet*	LXXII.	366
Ravenelianus, *Lea*	XVI.	70
rectilinearis, *Sowerby*	LXV.	332
rectus, *Lamarck*	XIX.	86
reflexus, *Rafinesque*	VI.	23
regularis, *Lea*	LXVIII., 351, and XXXIV.	181
reniformis, *Schmidt*	LXXII.	371
reticulatus, *Moricand*	LXXXVI.	458
retusus, *Lamarck*	LXXI.	363
rhomboides, *Lea*	LXXXIX.	480
rhomboidea (Mya), Schröter	XXII.	98
rhombula, Lamarck	LXVIII.	346
Rhuacoica (Monocondylæa), D'Orbigny	XCIII.	505
Riddellii, *Lea*	LXXXIII.	442
ridibundus, *Say*	XV.	63
Roanokensis, *Lea*	LXVII.	341
Roissyi, *Michaud*	LXII.	311
rostrata, Studer	XXV.	124
rostrata, Lamarck	XXV.	123
rostrata, Valenciennes	XVI.	94
rotundatus, *Lamarck*	LXXIV.	384
rotundatus, Reeve	XXIII.	106
rotundus (*Diplodon*), *Spix*	LXXII.	379
rotundus, Moricand	LXXXVI.	467
Rousii, Dupuy	XXV.	123
Rowellii, *Lea*	LXXXVIII.	471
rubellianus, *Lea*	XC.	490
rubiginosus, *Lea*	XXVII.	136
rufusculus, *Lea*	LXXIII.	377
rugosus, *Barnes*	LX.	302
rugosus (in part), Barnes	VII.	25
rugulosa (Mya), Wood	LI.	267
rusticus, *Sowerby* (not *Lea*)	LXIV.	324
sacculus, *Anthony*	XV.	67
sagittiformis, *Lea*	XCII.	499
sagrinatus, Sowerby	LXVII.	345
Salmenianus (*Anodon*), *Gould*	XCIV.	513
Sandrii, *Villa*	LXXIX.	413
Sapotalensis, *Lea*	XCI.	495
satur, *Lea*	XCII.	501
Sayii, *Tappan*	LXX.	356
scalenia, Rafinesque	LXIX.	82
Schoolcraftensis, *Lea*	I.	3
Schwartzenbachii, *Rossmässler*	XLIV.	241
scobinatus, *Lea*	LXIII.	313
sculptilis (Alasmodon), Say	LXXVI.	399
scutum, *Benson*	XCIV.	510
securis, *Lea*	LXI.	304
semigranosus, Reeve	X.	36
semiquadratus, *Sowerby*	XLVIII.	258
semirugata, Lamarck	XXII.	98
Shanghaiensis, *Lea*	XX.	96
Shepardianus, *Lea*	XX.	90
Showalterii, *Lea*	LXXXI.	426
Shuttleworthi, *Lea*	XXXII.	167
Siculus, *Swainson*	LXXI.	364
Sikkimensis, *Lea*	LXXVI.	400
siliquoidens, Barnes	LVIII.	293
sinuatus, *Lamarck*	LXII.	311
Soleniformis, *Lea*	XLV.	243
solida (Mysca), Turton	XXV.	124
solidus, *Lea*	XXVII.	133
Solisianus, *D'Orbigny*	XCIII.	507
sordidus, Lea	LXVIII.	346
Sowerbianus, *Lea*	XIV.	58
sparsus, *Lea*	IV.	14
spathulatus, *Lea*	LXV.	328
speciosus, *Lea*	LXXXIV.	447
Spillmannii, *Lea*	LXXXII.	435
spinosus, *Lea*	XLIX.	261
spissus, *Lea*	LXXXVIII.	476
splendidus, *Lea*	XXXI.	161
spuria (Mya), Gmelin	LXXI.	360
stapes, *Lea*	XIII.	52
stegarius, *Rafinesque*	XII.	45
Stewardsoni, *Lea*	XV.	66
Stonensis, *Lea*	LXXXVI.	462
stramineus, *Conrad*	LXXX.	422
stramineus, Reeve	XXXIX.	217
striatissimus, *Anthony*	LXXXVI.	460
striatulus, *Lea*	LXXII.	367
striatus, *Lea*	LXXVIII	407

	Plate.	Species.
striatus, Rafinesque	VIII.	30
Stuarti, *Adams and Angas*	LIV. and LV.	279
subangulatus, *Lea*	LXV.	327
subglobosus, *Lea*	LXIV.	321
subovatus, *Lea*	LXXXV.	456
subovatus, Reeve	XXXI.	163
subplanus, *Conrad*	XLVII.	252
subrostratus, Reeve (not Say)	XVII.	78
subrotundus, *Lea*	XXVII., 137, and XXXVII.	201
subtentus, *Say*	LXXII.	370
subtetragona, Michaud	XXII.	98
subtortus, *Baird and Adams*	LXXXVII.	465
subtrigonus, Sowerby	LVIII.	292
succisus, *Lea*	XXXIII.	174
sulcatus, *Lea*	XIV.	60
sulcidens, Lamarck	LXVIII.	346
Sumatrensis, *Lea*	XXVIII.	142
superbus, *Lea*	LIX.	295
Swinhoei, *Reeve*	XLII.	232
Swainsoni, *Hanley*	LXXVI.	396
Taitianus, *Lea*	LXVII.	338
Tampicoensis, *Lea*	LVII.	291
Tavoyensis, *Gould*	XIII.	49
Tecomatensis, Lea	LVII.	291
tenuissimus, *Lea*	XLIV.	240
teres, Conrad	XIX.	87
testudineus, *Morelet*	XXII.	101
teretiusculus, *Philippi*	LXXV.	389
Texasianus, *Lea*	XL.	218
Thwaitesii, *Lea*	XXIII.	105
Tientsinensis, *Crosse and Debeaux*	XCVI.	522
torsa, Rafinesque	LXXI.	363
tortivus, *Lea*	XXXVI.	193
tortuosus, *Sowerby*	LXX.	330
trabalis, Conrad	LXXVIII.	406
trapezoides, *Lea*	V.	17
triangularis, *Barnes*	LXVII.	340
triangulatus, *Lea*	LXXX.	419
trigonus, Sowerby (not Lea)	LXIV.	322
trigonus, *Lea*	LXXXVI.	459
trirostris, Benson (?)	LXV.	331
Troostensis, Reeve (not Lea)	XXXVIII.	210
Troostensis, *Lea*	LXXVIII.	406
truncata (Alasmodonta), Say	LXXVIII.	410
truncatus, Say	LXXIV.	380
truncatus, *Swainson*	LXXXV.	453
tuberculatus, *Rafinesque*	III.	9
tuberculatus, Barnes	I.	4
tuberculosa, Valenciennes	III.	9
tumidulus, *Lea*	LXXXIX.	482
tumidus, *Retz*	XXIII.	124
turgidulus, *Lea*	XVII.	80
turgidus, *Lea*	III.	10
Turtoni, Payraudeau	LXXI.	364
umbrans, *Lea*	XXXIV.	179
umbrosus, *Lea*	XXXIII.	170
undatus, *Barnes*	LXXXVI.	459
undulatus, *Say*	LXXVI.	399
undulatus, Barnes	IV.	16
Uruguayensis, *Lea*	LXXXIV.	448
Valentianus, *Sowerby*	XLI.	225
Vanuxemensis, *Lea*	XXXIX.	216
variabilis, *Maton*	LXXIV.	381
varicosus, *Lea*	VIII.	31
varicosa, Lamarck	LI.	267
Vaughanianus, *Lea*	LXI.	308
velaris, *Benson*	LXXII.	368
vellicatus, *Reeve*	XXII.	103
ventricosa (Mya), Solander	XXIV.	115
ventricosus, *Barnes*	XLIII.	235
venustus, *Lea*	LXIV.	326
verecundus, *Gould*	XXV.	125
Verreauxianus, *Lea*	LXIX.	352
verrucosus, Barnes	III.	9
verrucosus, *Rafinesque*	I.	4
Vignouanus, *Bernardi*	XXV.	120
Virginiana, Lamarck	XXVII.	139
viridis, *Rafinesque*	XLV.	244
vittatus, *Lea*	XVIII.	83
Von Buschea, *Sowerby*	LI.	269
Vondembuschianus, *Lea*	XCV.	518
Wardii, *Lea*	LXXXII.	434
Wheatleyanus, *Lea*	XC.	487
Wilsonii, *Lea*	LXXXVIII.	472
Woodwardianus, *Lea*	XVI.	74
Woolwichii, Morelet	XXII.	98
Wymannii, *Lea*	LXXXIV.	449
Wynegungensis, *Lea*	LXVII.	339
Zieglerianus, *Lea*	XXXVI.	191
ziczac, *Lea*	XXXIX.	213

ERRATA AND REMARKS.

Sp. 13. For *U. atrocostatus*—read *heros*, Say.

Sp. 30. For *U. striatus*—read *Cooperianus*, Lea.

Sp. 32. For *U. nodulosus*—read *Lecai*, Gray, Griffith's ed. Cuvier, Moll. pl. 21. f. 1.

Sp. 35. Is not the *U. perplicatus* of Conrad, Proc. Nat. Sc. Philad. vol. i. p. 19, which is probably the true *atrocostatus*.

Sp. 36. Is not the *U. semigranosus* of Von dem Busch, in Philippi's 'Abbildungen' (vol. i. p. 19), which looks more like *corium*.

Sp. 37. For *U. pliciferus*—read *U. crocodilorum*, Morelet, Test. Noviss. vol. i. p. 28. River Usumasinta, Central America.

Sp. 61. *U. deviatus*—reference should be Anthony, Amer. Journ. Conch. 1865, p. 165. pl. 12. f. 2.

Sp. 68. *U. nucleopsis*—reference should be Conrad, Journ. Ac. Nat. Sc. Philad. ser. 2, vol. i. p. 276. pl. 37. f. 8.

Sp. 72. Is not the *U. mundus* of Lea, but nearer his *Mooresianus* and *cuneolus*.

Sp. 76. Is not the *U. Hanleyanus* of Lea, but nearer his *interventus*.

Sp. 77. *U. medius*—compare with this *U. curtus*, Lea, Obs. on Unio, vol, viii. p. 253.

Sp. 78. Is not the *U. subrostratus* of Say (New Harmony Dissem. U. Knowl. 1831), but nearer the *patulus* of Lea, Obs. on Unio, vol. i.

Sp. 106. *U. rotundatus*—names are wholly erroneous. Tryon thinks the figure is meant for *U. Kienerianus* of Lea.

Sp. 110. *U. Napeanensis*—add reference Journ. Ac. Nat. Sc. Philad. ser. 2, vol. ii. p. 296. pl. 24. f. 4.

Sp. 119. *U. Vignonianus*—add reference *Margaritana Vignoniana*, Bernardi, Journ. Conch. ser. 2, vol. iii. p. 302. pl. 10. It is at least as much an *Anodon* as a *Unio*.

Sp. 131. For *U. flavidens* read *favidens*, Benson, Ann. Nat. Hist. 1862, ser. 2, vol. x. p. 188, in part. It is the *U. trirostris*, Benson, MS. in Hanley's 'Photographic Conchology,' pt. 1. (1862).

Sp. 147. *U. inornatus* reference should have been Lea, Obs. on Unio, vol. vi. pl. 24. f. 6.

Sp. 150. *U. auratus* add as authority Hanley, R. Bivalves, p. 348, pl. 21. f. 29. It is to be regretted that many of Benson's Indian Unionæ (such as *Ascia*, *corbis*, *radula*, etc.), figured in that cheap and useful compendium, are no longer accessible.

Sp. 195. *U. olivarius*—add as authority Lea, Obs. on Unio, vol. i. p. 118. pl. 16. f. 38, and for habitat Hindostan.

Sp. 207. For *U. Murchisonianus*—read *U. Douglasiæ*, Gray, Griffith's ed. Cuvier, Moll. pl. 21. f. 2, and put previous name as synonym.

Sp. 208. *U. exiguus* is not so of Lea, but possibly his *fatuus* (Obs. on Unio, vol. iii. p. 39).

Sp. 211. *U. Muhlfeldtianus* for f. 6 read pl. 12. f. 36.

Sp. 222. *U. Indicus*—compare *U. triembolus* of Benson (Ann. Nat. Hist. 1862, ser. 2, vol. x. p. 190), and *Rajahensis* of Lea (Obs. on Unio, vol. iii. p. 77. pl. 23. f. 53).

Sp. 224. *U. Nyassensis*—substitute as authority, Lea, Proc. Philad. 1864.

Sp. 225. *U. Valentianus*—compare *U. umbonatus*, Bourgignat, in the Rev. et Mag. Zool.

Sp. 226. *U. Caffer*—*U. Africanus*, Lea, Obs. on Unio, vol. vi. pl. 27. f. 15, seems identical.

Sp. 260. *U. Housei*—for vol. ii. read vol. vi.

Sp. 262. *U. crispisulcatus*—substitute as authority, Benson, Ann. Nat. Hist. 1862, vol. x. p. 193, and add Birmah as locality.

Sp. 264. *U. Cumingii*—substitute as reference, Proc. Ac. Nat. Sc. Philad. vol. vi. p. 54, and for habitat Northern China.

Sp. 275. *U. discoideus* is not so of Lea; it approaches his *lævissimus*.

Sp. 280. *U. plicatus*—both name and synonyms must be suppressed.

Sp. 286. *U. Chilensis*—see the *Chilensis* of Gray (Spic. Zool. pl. 6. f. 12): Parreys does not describe shells.

Sp. 292. For *U. subtrigonus*—read *Cambojensis*, Petit (*Monocondylea*), Journ. Conch.

Sp. 299. *U. fluctiger*—according to Benson is merely his *U. scobina* (Hanley, Rec. Bivalves, p. 382. pl. 23. f. 40), and comes from Assam.

Sp. 306. For *U. multiradiatus*—read *U. luteolus*, var.

Sp. 310. *U. discus* the habitat, at the least, is erroneous.

Sp. 322. *U. trigonus* is not that of Lea.

Sp. 324. *U. rusticus* is not that of Lea.

Sp. 331. *U. trirostris* is merely a form of *cæruleus*.

Sp. 345. For *U. sagrinatus* read *U. Newcombianus*, Lea, Journ. Ac. Nat. Sc. Philad. ser. 2, vol. v. pl. 30. f. 27. The habitat is Nicaragua.

Sp. 347. *U. jejunus* is not so of Lea, but the *depressus* of D'Orbigny (not of Lamarck), from Chili.

Sp. 465. *U. contortus*—compare *U. divergens*, Benson, Journ. Asiat. Bengal, vol. xxiv.

The pictorial element having ever been the pervading principle of the 'Conchologia Iconica,' good species have been frequently omitted, not from ignorance, but from sheer inability to procure examples for delineation. The reader is recommended to consult the following works, which contain descriptions of interesting Unionæ:—

Morelet, 'Testacea Novissima' (descriptions utterly inadequate).

Proceedings of the Academy of Nat. Sc. of Philadelphia, vols. iii., vi., vii., and for 1866 (usually the same fault).

Proceedings of the Boston Nat. Hist. Society, vols. ii., iii., v., vi. (ditto).

Tryon's 'American Journal of Conchology.'

Journal de Conchyliologie, vols. iii., iv., viii., xiii.

Annals of Natural History, 1862, vol. x.

Zeitschrift für zu Malacozoologie, 1846, 1848, 1851, 1852.

Malakozoologische Blätter, 1858, 1859, 1860.

MONOGRAPH

OF THE GENUS

PLEIODON.

"We sack, we ransack to the utmost sands
Of native kingdoms, and of foreign lands;
We travel sea and soil, we pry, we prowl,
We progress, and we prog from pole to pole."

Quarles.

1.

2.

Sowerby, del. et lith.

Vincent Brooks, Imp

PLEIODON.

Genus PLEIODON, *Conrad.*

Testa fluviatilis, æquivalvis, inæquilateralis, ovalis, intus margaritacea, extus epidermide crassâ lævigatâ induta, margine cardinali complanato, crasso, tuberculis oblongis transversis irregularibus crenato.

Shell fluviatile, equivalve, inequilateral, oval, pearly inside, covered with a smooth, thick epidermis outside, hinge margin flattened, thick, crenated with oblong, transverse, irregular tubercles.

Only two species are known of this genus, both from Central Africa. Both species are thick shells, of an ovate form, with broad, laminar, wrinkled hinges. The species of *Iridina*, on the contrary, are thin, long, straight shells, with linear hinge not always crenated.

Species 1. (Mus. Sowerby.)

PLEIODON OVATUS. *P. testâ obliquè ovatâ, tumidâ, intus margaritaceâ, roseo-argenteâ, extus epidermide olivaceâ, latere antico breviusculo, angusto, medio inflato, lato, latere postico subangulato, obliquè truncato, margine dorsali elevato, margine cardinali lato, posticè truncato, angulatim crenato, medio contracto, anticè brevi subradiatim crenato.*

THE OVATE PLEIODON. Shell obliquely ovate, tumid, pearly, rose-silvery within, with an olive epidermis without, anterior side rather short, narrow, middle inflated, broad, posterior side rather angular, obliquely truncated, with dorsal margin elevated, hinge margin broad, posteriorly truncated, angularly crenated, in the middle contracted, anteriorly short, subradiately crenated.

SWAINSON, Zoological Illustrations, pl. 119. f. 2. 2 a.

Pleiodon M'Murtrei, Conrad.

Hab. Central Africa.

This is one of the most beautiful shells of the whole tribe of "Freshwater Mussels."

Species 2. (Mus. Brit.)

PLEIODON SPEKII. *P. testâ oblongâ, tumidâ, intus subrufâ et argenteo-cæruleâ, extus epidermide castaneâ, versus marginem ventralem nigrescente, latere antico brevissimo, angusto, medio ad marginem ventralem contracto, latere postico elongato, obliquè subtruncato, termine acuminato, margine dorsali elevato, margine cardinali infra umbonem emarginato, anticè brevissimo, leviter crenulato, posticè elongato subradiatim crenato.*

SPEKE'S PLEIODON. Shell oblong, tumid, within rather rufous and silvery-blue, without with a chestnut epidermis, becoming blackish towards the ventral margin, anterior side very short, narrow, middle contracted at the ventral margin, posterior side elongated, obliquely subtruncated, extremity acuminated, dorsal margin elevated, hinge margin emarginate under the umbo, anteriorly very short, slightly crenulated, posteriorly elongated, subradiately crenated.

WOODWARD, Pro. Zool. Soc. 1859.

Hab. Lake Tanganyka, Central Africa.

The unique specimen in the British Museum was brought from the great freshwater lake by the African traveller whose name it bears.

1.

2.b.

2.a.

3.a.

3.b.

3.c.

Sowerby, del. et lith.

Vincent Brooks, Imp

BULLA.

PLATE I.

Genus BULLA.

Testa convoluta, ovata, solida, lævigata, apice umbilicato, spirâ immersâ; aperturâ pyriformi; labro simplici, supra spiram elevato; labio super anfractum ultimum extenso; columellâ arcuatâ, incrassatâ; operculo nullo.

Shell convolute, ovate, solid, smooth, apex umbilicated, spire immersed; aperture pyriform; outer lip simple, raised above the spire; inner lip extended over the body whorl; columella arched, thickened; operculum none.

In the monograph of *Bulla* by Mr. A. Adams, published in Sowerby's Thesaurus, the species are arranged in groups named "*subgenera*." Some of these groups differ from each other so materially in the structure of the animal, as well as in the form and substance of the shell, that it seems more correct to monograph them separately as *genera*. They will, however, appear consecutively, and a general index will be given of the species of the *family*. The shells of true *Bullæ* differ from those of the other genera in the solidity of their substance and their porcellanous surface. Of the nineteen species enumerated, a large proportion are natives of the western hemisphere, as the West India islands and California. Others are found in Australia and the Philippine Islands.

Species 1. (Mus. Cuming in Brit.)

BULLA TRIFASCIATA. *Bul. testâ ovato-subglobosâ, supernè angustâ, tenuiusculâ, lævigatâ, griseâ, maculis fuscis irregularibus parvis crebrè aspersâ, griseo-nigrescenti spiraliter trifasciatâ; umbilico angusto, profundo, aperturâ pyriformi; labro supra medium spiraliter tortuoso, obliquè producto, supra apicem elevato.*

THE THREE-BANDED BULLA. Shell ovate-subglobose, narrow above, rather thin, smooth, grey, closely sprinkled with brown irregular small spots, with three blackish-grey spiral bands; umbilicus narrow, deep, aperture pyriform; outer lip spirally tortuous above the centre, obliquely produced, elevated above the apex.

SOWERBY.

Hab. Philippine Islands.

The thinness of this shell, the fineness of its marbled marking, the dark spiral bands, the tapering of the upper end of the spiral curve of the upper part of the outer lip, being all constant characters, may appear sufficient to justify the separation of this species from *Bulla ampulla*.

Species 2. (Fig. *a*, *b*, Mus. Cuming in Brit.)

BULLA CRUENTATA. *Bul. testâ ovato-subpyriformi, supra medium coarctatâ, solidâ, lævigatâ, rubrâ, maculis magnis fusco-rubescentibus punctis nigrescentibus variegatâ; aperturâ magnâ, pallidâ rubescenti, infrà expansâ; labro rosaceo, supra apicem elevato, rotundato; labio albo, incrassato; columellâ crassâ, latâ, arcuatâ; umbilico apicali latiusculo.*

THE BLOOD-STAINED BULLA. Shell ovate-subpyriform, narrowed above the centre, solid, smooth, red, variegated with large red-brown patches and blackish spots; aperture large, pale reddish, expanded at the lower part; outer lip rose-coloured, raised above the apex, rounded; inner lip white, thickened; columella thick, broad, arched; apical umbilicus rather wide.

ARTHUR ADAMS, Sowerby's Thesaurus, Bulla, sp. 51. fig. 75.

Hab. Moluccas.

Besides the difference in general colouring and the rose-bordering of the outer lip, there is a difference in shape between this species and *Bulla ampulla*, the former being more compressed above the centre.

Species 3. (Fig. *a*, *b*, Mus. Cuming in Brit.)

BULLA AMPULLA. *Bul. testâ ovato-ventricosâ, solidâ, lævigatâ, albido-grisescenti, griseo fuscoque variè angulatim marmoratâ; umbilico apicali lato; aperturâ latâ, anticè latissimâ; labro supra apicem elevato, obliquo; labio solido; columellâ crassâ, obliquè arcuatâ.*

THE BOTTLE BULLA. Shell oval-ventricose, solid, smooth, greyish-white, variously angularly marbled with grey and brown; apical umbilicus wide; aperture wide, anteriorly very wide; outer lip raised above the apex, oblique; inner lip solid; columella thick, obliquely arched.

LINNÆUS, Systema Naturæ.

Hab. Philippine Islands.

In most specimens the upper end of the shell is only a little less rounded and broad than the lower.

4.a.

5.a.

5.b.

6.a.

6.b.

6.c.

4.b.

Sowerby, del. et lith.

Vincent Brooks, Imp.

BULLA.

PLATE II.

Species 4. (Fig. *a*, *b*, Mus. Cuming in Brit.)

BULLA TENUISSIMA. *Bul. testâ ovato-oblongâ, subcylindraceâ, subpellucidâ, tenuissimâ, pallidè fuscâ, maculis subquadratis, obscurè fuscis, præcipuè in fasciis quatuor dispositis variegatâ, umbilico lato, aperturæ margine rectiusculo, margine columellari albo, planato, arcuato, angusto.*

THE VERY THIN BULLA. Shell ovate-oblong, subcylindrical, subpellucid, very thin, pale brown, variegated with subquadrate, dull-brown spots, principally arrayed in four rows, umbilicus wide, margin of the aperture rather straight, columellar margin white, flat, arched, narrow.

SOWERBY.

Hab. Swan River, Australia.

Remarkable for the thinness of its half-transparent texture.

Species 5. (Fig. *a*, *b*, Mus. Cuming in Brit.)

BULLA OVULA. *Bul. testâ solidâ, ovato-subcylindraceâ, posticè subangustatâ, termino truncato, anticè subinflatâ, termino rotundo, spiraliter griseo trifasciatâ, punctis et maculis rubris variegatâ, intùs albâ, aperturâ posticè coarctatâ, anticè latâ, labio crasso, arcuato.*

THE EGG BULLA. Shell solid, ovate-subcylindrical, posteriorly rather narrow, with end truncated, anteriorly slightly swollen, with end rounded, with three spiral grey bands, variegated with red dots and spots, white within, aperture narrowed posteriorly, wide in front, inner lip thick, arched.

GOULD, —— ?

Hab. —— ?

Species 6. (Fig. *a*, *b*, *c*, Mus. Cuming in Brit.)

BULLA NEBULOSA. *Bul. testâ ovato-subglobosâ, inflatâ, lævigatâ, tenuiusculâ, versus spiram paulo angustatâ, cinereâ vel rubescenti, maculis guttatis albo-cinereis angulatim dispositis pictâ, intùs pallidè cinereâ, maculis nebulatâ, umbilico spirali angusto, aperturâ posticè elevatâ, labro arcuato, anticè expanso, labio super anfractus expanso, columellâ spirali latissimâ.*

THE CLOUDY BULLA. Shell ovate-subglobose, inflated, smooth, rather thin, a little narrowed towards the spine, ash- or reddish-painted, with tear-like ash and white spots angularly disposed, pale ash within, clouded with spots, spiral umbilicus narrow, aperture posteriorly elevated, outer lip arched, anteriorly expanded, inner lip spread upon the whorl, spiral columella very wide.

GOULD, United States' Survey Expedition.

Hab. Guaymas, Gulf of California.

A lighter and more globose shell than *Bulla ampulla*.

7.a.

8.a.

8.b.

9.a.

9.b.

9.c.

7.b.

Sowerby, del et lith.

Vincent Brooks Imp.

BULLA.

PLATE III.

Species 7. (Fig. *a*, *b*, Mus. Cuming in Brit.)

BULLA AMYGDALUS. *Bul. testâ solidâ, oblongo-subcylindraceâ, supernè et infernè spiraliter striatâ, supra medium angustatâ, pallidè rufâ et griseâ, fusco alboque variegatâ, umbilico spirali profundo, aperturâ supernè elevatâ, acuminatâ, supra medium coarctatâ, columellâ spirali ad dorsum prominenti.*

THE ALMOND BULLA. Shell solid, oblong-subcylindrical, spirally striated above and below, narrowed above the middle, pale reddish and grey, variegated with brown and white, spiral umbilicus deep, aperture elevated above, acuminate, contracted above the middle, spiral column prominent at the back.

LISTER, Hist. Conch. t. 714. f. 72. Sowerby's Thesaurus, sp. 44. pl. 122. f. 63.

Bulla striata, Bruguière.

Hab. Gulf of Mexico; West Indies.

Species 8. (Fig. *a*, *b*, Mus. Cuming in Brit.)

BULLA PUNCTULATA. *Bul. testâ ovato-oblongâ, solidâ, lævigatâ, pallidè rufescenti, maculis nigris albo-punctatis pictâ, fasciis duabus pallidè fuscis cinctâ, lateribus convexis, aperturâ supra medium coarctatâ, anticè fere acuminatâ, labio crasso, anticè rectiusculo.*

THE SPOTTED BULLA. Shell ovate-oblong, solid, smooth, pale reddish, painted with black, white-pointed spots, girt with two pale brown bands, sides convex, aperture narrowed above the middle, anteriorly almost acuminated in front, inner lip thick, anteriorly rather straight.

A. ADAMS, Sowerby's Thesaurus; Bulla, sp. 53. pl. 123. f. 77.

Hab. Panama; H. Cuming.

The little black, white-tipped spots give a very pretty appearance to this shell.

Species 9. (Fig. *a*, *b*, *c*, Mus. Cuming in Brit.)

BULLA OBLONGA. *Bul. testâ oblongâ, subcylindraceâ, posticè attenuatâ, anticè subacuminatâ, longitudinaliter substriatâ, striis minutissimis spiraliter cinctâ, pallidè fulvâ, vel rufo-fuscâ, maculis et fasciis interruptis vel undulatis nigrescentibus variegatâ, intùs albâ, labro arcuato.*

THE OBLONG BULLA. Shell oblong, subcylindrical, posteriorly attenuated, anteriorly subacuminated, longitudinally slightly striated, girt with very minute spiral striæ, pale fawn or reddish-brown, variegated with blackish spots and interrupted or undulating bands, white within, outer lip arched.

A. ADAMS, Sowerby's Thesaurus; Bulla, sp. 50. pl. 123. f. 74.

Hab. Philippines and Island of Annaa, on the reefs; H. Cuming.

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10. a.

11. a.

11. b.

12. a.

12. b.

12. c.

10. b.

Sowerby, del. et lith.

Vincent Brooks, Imp.

BULLA.

PLATE IV.

Species 10. (Fig. *a*, *b*, Mus. Cuming in Brit.)

BULLA SOLIDA. *Bul. testâ crassâ, subcylindraceâ, breviusculâ, posticè subattenuatâ, anticè rotundatâ, lævigatâ, albidâ, fasciis et maculis latis rubris, cum lineis albis angularibus nebulatâ et variegatâ, aperturâ albâ, labro intùs incrassato, labio valdè arcuato.*

THE SOLID BULLA. Shell thick, subcylindrical, rather short, posteriorly subattenuated, anteriorly rounded, smooth, whitish, variegated and clouded with red bands and broad spots, with white angular lines; aperture white, outer lip thickened within, inner lip strongly arched.

A. ADAMS, MS. Cuming's Cabinet.

Hab. —— ?

Species 11. (Fig. *a*, *b*, Mus. Cuming in Brit.)

BULLA MEDIA. *Bul. testâ subcylindricâ, solidâ, griseâ, fusco-nigrescenti punctatâ et nebulatâ, supra medium coarctatâ, infernè subdistanter spiraliter sulcatâ, umbilico spirali spiraliter striato, aperturâ supernè angustato, rectiusculo, labro coarctato, labio infra valde arcuato.*

THE MEDIUM BULLA. Shell subcylindrical, solid, grey, spotted and clouded with blackish-brown, narrowed above the middle, rather distantly spirally grooved below, spiral umbilicus spirally striated; aperture narrowed above, rather straight, outer lip contracted, inner lip strongly arched anteriorly.

PHILIPPI, Zeitsch. für Malak. 1847. Sowerby's Thesaurus, pl. 123, f. 70.

Hab. West Indies.

Species 12. (Fig. *a*, *b*, *c*, Mus. Cuming in Brit.)

BULLA AUSTRALIS. *Bul. testâ solidâ, cylindricâ, utrinque obtusâ, latâ, lævigatâ, pallidè fulvâ, griseo quadrifasciatâ, maculis minutis angulatis variegatâ, lateribus rectiusculis, umbilico spirali marginato; aperturâ albâ, labro supernè cuneato, labio infrà crasso, spiraliter tortuo.*

THE AUSTRALIAN BULLA. Shell solid, cylindrical, obtuse on both sides, wide, smooth, pale fawn, with four grey bands, variegated with minute angular spots, sides rather straight, spiral umbilicus bordered; aperture white, outer lip cuneate above, inner lip thick below, spirally tortuous.

GUOY et GAIMARD, Voy. de l'Astrolabe. Sowerby's Thesaurus, pl. 122. f. 64–66.

Hab. Tahiti, on the reefs; Cuming.

The broad cylindrical form and cuneate outer lip are sufficient to distinguish this species from others.

January, 1868.

13.

14.a.

14.b.

15.a.

14.c.

14.a.

15.b.

Sowerby del et lith.

Vincent Brooks Imp.

BULLA.

PLATE V.

Species 13. (Mus. Cuming in Brit.)

BULLA ADANSONI. *Bul. testâ oblongo-subcylindraceâ, posticè angustatâ, solidâ, lævigatâ, suprà et infrà distanter sulcatâ, pallidè rufescenti, fusco et nigro angulatim marmoratâ, umbilico spiraliter striato, labio super anfractum ultimatum incrassato, columellâ rectiusculâ, aperturâ posticè angustatâ, labro incrassato, infrà expanso.*

ADANSON'S BULLA. Shell oblong-subcylindrical, posteriorly narrowed, solid, smooth, distantly grooved above and beneath, pale reddish, angularly marbled with brown and black, umbilicus spirally striated, inner lip thickened over the last whorl, columella rather straight, aperture posteriorly narrowed, outer lip thickened, expanded below.

PHILIPPI, Zeitschr. für Malak. 1847, p. 121.
Bulla striata (pars).

Hab. Senegambia.

The true *Bulla amygdalus* is a more cylindrical shell, with the outer lip more narrowed and compressed above the middle, and its umbilicus is not striated.

Species 14. (Fig. *a, b, c, d,* Mus. Cuming in Brit.)

BULLA OCCIDENTALIS. *Bul. testâ ovali, parvâ, oblongâ, tenui, lævigatâ, anticè spiraliter sulcatâ, albido-rufescenti, griseo nebulatâ et punctatâ, aut fusco-rubescenti, maculis castaneis marmoratâ, aut albidâ, maculis pallidis variegatâ, aut roseo-lineatâ, terminibus subacuminatis.*

THE WESTERN BULLA. Shell oval, small, oblong, thin, smooth, spirally sulcated in front, reddish-white, clouded and spotted with grey, or brownish-red marbled with chestnut, or whitish variegated with pale spots, or finely striped with pink, ends slightly acuminated.

ARTHUR ADAMS, Sowerby's Thesaurus; Bulla, sp. 49. f. 72, 73.

Hab. West Indies.

A faint indication of light pale lines between the spots of the marbled varieties connects them with the pink-striped variety, which otherwise would almost appear distinct.

Species 15. (Fig. *a, b,* Mus. Cuming in Brit.)

BULLA PUNCTATA. *Bul. testâ ovato-ventricosâ, solidâ, lævigatâ, posticè subangustatâ, griseo-rubescenti, fusco nebulatâ, punctis parvis aspersâ, termino posteriore obtuso, lateribus compressiusculis, umbilico magno, columellâ crassâ, rectiusculâ, labro tenuiter expanso.*

THE SPOTTED BULLA. Shell ovate-ventricose, solid, smooth, slightly narrowed posteriorly, reddish-grey, clouded with brown, sprinkled with small spots, posterior end obtuse, sides rather compressed, umbilicus large, columella thick, rather straight, outer lip thinly expanded.

ARTHUR ADAMS, MS. in Mus. Cum.

Hab. ——?

While the form is like that of *Bulla cruentata*, the markings of this shell resemble those of *B. aspersa*, which is much more tapering towards the upper end.

March, 1868.

16.

17. a.

17. b.

17. c.

18. a.

18. b.

19.

Sowerby, del. et lith.

Vincent Brooks Imp.

BULLA.

PLATE VI.

Species 11. (Fig. *c*, Mus. Cuming in Brit.)

BULLA MEDIA (Plate IV.) The specimen was named *B. major* in the Cumingian Cabinet. Its sides are a little less compressed than in the shell figured as 11, *a*, *b*, and the spots are finer and mixed with white specks. These differences, however, are rather varietal than specific.

Species 16. (Mus. Cuming in Brit.)

BULLA MARMOREA. *Bul. testâ oblongo-subcylindraceâ, lævigatâ, tenuiusculâ, griseo-rufescenti, fusco marmoratâ, terminibus subæqualibus, aperturâ latiusculâ, margine supra medium producto, columellâ rectiusculâ, umbilico lato.*

THE MARBLED BULLA. Shell oblong-subcylindrical, smooth, rather thin, reddish-grey, marbled with brown, ends nearly equal, aperture rather wide, margin produced above the middle, columella rather straight, umbilicus wide.

PEASE, MS.

Hab. Sandwich Islands.

Resembling *Bulla tenuissima*, but a much more solid shell.

Species 17. (Fig. *a*, *b*, Mus. Cuming in Brit.)

BULLA RUFO-LABRIS. *Bul. ovato-subpyramidatâ, solidâ, lævissimâ, griseo-rufescenti, maculis nebulosis uno latere albo-punctatis variegatâ, aperturâ pyriformi, posticè angustato, labro ad marginem rubro picto, columellâ latâ, subcomplanatâ, arcuatâ, umbilico parvo.*

THE RED-LIPPED BULLA. Shell ovate-subpyramidal, solid, very smooth, reddish-grey, variegated with cloudy spots, white-pointed on one side, aperture pyriform, narrowed posteriorly, outer lip painted red at the margin, columella wide, rather flat, arched, umbilicus small.

ARTHUR ADAMS, Sowerby's Thesaurus; Bulla, sp. 52. f. 76.

Hab. Gallipagos Islands; fine coral sand, six fathoms.

Species 18. (Fig. *a*, *b*, Mus. Cuming in Brit.)

BULLA ASPERSA. *Bul. testâ ovatâ, supra medium acuminatâ, lævigatâ, solidâ, rubescenti, fusco nigroque marmoratâ, albo-punctatâ, aperturâ pyriformi, labro supra medium producto, ad terminum elevato, infrà expanso, columellâ rectiusculâ, rotundatâ, crassâ, umbilico angusto.*

THE SPRINKLED BULLA. Shell ovate, acuminated above the middle, smooth, solid, reddish, marbled with brown and black, spotted with white, aperture pyriform, outer lip produced above the middle, raised at the end, expanded below, columella rather straight, rounded, thick, umbilicus narrow.

ARTHUR ADAMS, Sowerby's Thesaurus; Bulla, sp. 54. f. 78.

Hab. Payti, Peru.

In the smallness of the upper end, this shell resembles *B. nebulosa*, but is much more solid than that species, and differently marked.

Species 19. (Mus. Cuming in Brit.)

BULLA QUOYI. *Bul. testâ parvâ, ovatâ, ventricosâ, supernè acuminatâ, lævigatâ, grisescenti, fusco et albo marmoratâ, umbilico angusto, profundo, aperturâ semiovatâ, labro tenui, columellâ rectiusculâ.*

QUOY'S BULLA. Shell small, ovate, ventricose, acuminated above, smooth, greyish, marbled with brown and white, umbilicus narrow, deep, aperture semiovate, outer lip thin, columella rather straight.

GRAY, Adams in Sowerby's Thesaurus; Bulla, sp. 48. f. 71.

Hab. Gallipagos Islands; in coral sand.

BULLA.

	Plate.	Species.
Adansoni, *Phil.*	V.	13
ampulla, *Linn.*	I.	3
amygdalus, *Lister*	III.	7
aspersa, *A. Adams*	VI.	18
Australis, *Quoy*	IV.	12
cruentata, *A. Adams*	I.	2
marmorea, *Pease*	VI.	16
media, *Phil.*	IV., VI.	11
nebulosa, *Gould*	II.	6
oblonga, *A. Adams*	III.	9
occidentalis, *A. Adams*	V.	14
ovula, *Gould*	II.	5
punctata, *A. Adams*	V.	15
punctulata, *A. Adams*	III.	8
Quoyi, *Gray*	VI.	19
rufo-labris, *A. Adams*	VI.	17
solida, *A. Adams*	IV.	10
striata, Brug.	III.	7
tenuissima, *Sowerby*	II.	4
trifasciata, *Sowerby*	I.	1

MONOGRAPH

OF THE GENUS

MYCETOPUS.

"Acquaint thyself with God if thou wouldst taste
His works."—*Cowper.*

Sowerby, del et lith.

Vincent Brooks, Imp

MYCETOPUS.

PLATE I.

Genus MYCETOPUS.

Testa bivalvis, bimusculosa, angustissima, lateraliter elongata, lævigata, epidermide fuscâ aut olivaceâ induta, utrinque hians, posticè latior, intus margaritacea, margine cardinali tenui, recto, edentulo.

Shell bivalve, bimuscular, very narrow, laterally elongated, smooth, covered with a brown or olive epidermis, gaping at both ends, wider posteriorly, pearly within, cardinal margin thin, straight, without teeth.

The most remarkable character of this genus of freshwater bivalves is in the foot of the animal, which is very long, and terminates in a sort of button. The shells might be described as very narrow, soleniform Anodons; nor is it by any means certain that all the species here enumerated really are members of the genus. In one or two cases, the animals being unknown, the shells are associated with it on account of their resemblance in form. The rivers of South America appear to be the dwelling-places of the Mycetopodes, with the exception of *M. rugosus*, from Victoria, and *M. emarginatus*, from Siam.

Species 1. (Mus. Cuming in Brit.)

MYCETOPUS SOLENIFORMIS. *Myc. testâ cylindraceâ, elongatâ, subæquilaterâ, medio coarctatâ, intus pallidâ; latere antico latè hiante, rotundato, paulo breviore; latere postico angulato, paulo hiante, margine terminali truncato, laterali declivi, medio depresso, margine cardinali recto, ventrali concavo.*

THE SOLENIFORM MYCETOPUS. Shell cylindrical, elongated, subequilateral, narrowed in the middle, pale within; anterior side widely gaping, rounded, a little shorter; posterior side angular, a little gaping, terminal margin truncated, lateral sloped, middle depressed, cardinal margin straight, ventral concave.

D'ORBIGNY, Voyage dans l'Amérique Méridionale, pl. 66. f. 1.

Hab. Bolivia.

Species 2. (Mus. Cuming in Brit.)

(*And Fig. 2, a, Pl. III.*)

MYCETOPUS SILIQUOSUS. *Myc. testâ lævigatâ, subæneatâ, oblongâ, valde inæquilaterali, compressâ; latere antico brevi, hiante, termino rotundo; latere postico producto, latiusculo, obtusè angulato, margine terminali obliquè truncato, margine ventrali convexiusculo.*

THE POD MYCETOPUS. Shell smooth, subcuneate, oblong, very inequilateral, compressed; anterior side short, gaping, round at the end; posterior side produced, rather wider, obtusely angular, terminal margin obliquely truncated, ventral margin rather convex.

D'ORBIGNY, Voyage dans l'Amérique Méridionale, pl. 67.

Anodon longinum, Spix.

Hab. River Amazon, Chiquitos, Bolivia.

The shells of this species vary greatly in the proportions of their parts, some specimens in the D'Orbignyan collection being little more than half the width of others in proportion to their length. The posterior ventral margin is slightly convex in some cases.

March, 1868.

3.

4.

5.

6.

Sowerby del et lith.

Vincent Brooks, Imp.

MYCETOPUS.

PLATE II.

Species 3. (Mus. Brit.)

MYCETOPUS PLICATUS. *Myc. testâ tenuissimâ, compressâ, elongatâ, epidermide tenui indutâ, posticè concentricè undulatâ, medio obliquè plicatâ; latere antico brevissimo, hiante, complanato; latere postico latiusculo, canali foveolato obliquè radiato, margine ventrali subconvexo, termino rotundatim truncato.*

THE PLAITED MYCETOPUS. Shell very thin, compressed, elongated, covered with a thin epidermis, posteriorly concentrically undulated, obliquely plicated in the middle; anterior side very short, gaping, flattened; posterior side rather wide, obliquely rayed with a pitted canal, ventral margin rather convex, end roundly truncated.

GRAY? MS., Mus. Brit.

Hab. ——?

This species, placed in the British Museum among the *Iridinæ*, appears to me to be much more suitably placed in our present genus, so far as we can judge from the form of the shell.

Species 4. Mus.? (copied.)

MYCETOPUS PYGMÆUS. *Myc. testâ subrhomboideâ, lævigatâ, tenuissimâ, pallidè stramineâ, viridi fasciatâ, intus vividè margaritaceâ; latere antico producto, paulo angustiore, termino rotundo; latere postico subcuneiformi, rotundatim angulato, termino truncato.*

THE PYGMY MYCETOPUS. Shell subrhomboidal, smooth, very thin, pale straw, banded with green, bright pearly within; anterior side produced, a little narrower, end rounded; posterior side a little cuneiform, roundly angular, end truncated.

SPIX, Test. Brasil., pl. 23. f. 3, 4.

Hab. Brazil.

If this species be not distinct, it might rather be referred to *Mycetopus ventricosus* than to *M. siliquosus*, but the umboes are placed further back than in either.

Species 5. Mus.? (copied.)

MYCETOPUS WEDDELLII. *Myc. testâ elongatâ, rectâ, viridi, lævigatâ, tenui; latere antico producto, termino rotundatim subquadrato; latere postico obtusè angulato, termino obliquè subtruncato, marginibus dorsali et ventrali rectis, parallelibus.*

WEDDELL'S MYCETOPUS. Shell elongated, straight, green, smooth, thin; anterior side produced, end roundly subquadrate; posterior side obtusely angular, end obliquely subtruncated, dorsal and ventral margins straight, parallel.

HUPÉ, Expéd. dans l'Amér. du Sud, p. 93. pl. 20. f. 2.

Hab. Santa Anna de Chiquitos, Brazil.

The elongated, parallel form of this small shell distinguishes it from others of its genus.

Species 6. (Mus. Cuming in Brit.)

MYCETOPUS EMARGINATUS. *Myc. testâ lævigatâ, tenuissimâ, transversè elongatâ, cuneato-soleniformi, epidermide striatâ, tenui, pallidè luteâ; latere antico breri, ante umbones obliquè inflato, infra umbones in plicam obliquam contracto, post plicam depresso, angusto, gradatim crescente; latere postico cuneato, subinflato, obliquè in medium depresso, margine terminali truncato, marginibus dorsali et ventrali rectis, anticè magis approximatis.*

THE EMARGINATE MYCETOPUS. Shell smooth, very thin, transversely elongated, cuneate-soleniform, epidermis striated, thin, pale yellowish; anterior side short, obliquely inflated in front of the umboes, contracted into an oblique fold below the umboes, depressed behind the fold, narrow, gradually enlarging; posterior side cuneate, subinflated, obliquely depressed in the middle, terminal margin truncated, dorsal and ventral margins straight, approximating towards the anterior.

LEA, Obs. Unio, vol. x. p. 34. pl. 50. f. 305.

Hab. Siam.

There is a slight thickening of the hinge margin in this shell, which may almost be regarded as a long lateral tooth.

7.

2. a.

8.

Sowerby del. et lith.

Vincent Brooks, Imp.

MYCETOPUS.

PLATE III.

Species 2. (Fig. *a*, *Mycetopus siliquosus*, see Plate I.)

Species 7. (Mus. Brit.)

MYCETOPUS RUGATUS. *Myc. testâ cuneiformi, elongatâ, solidiusculâ, irregulariter concentricè rugatâ, epidermide olivaceo-fuscâ; latere antico producto, angusto, obliquè subinflato, termino rotundatim acuminato, medio compresso; latere postico latiore, angulato, margine terminali truncato; umbonibus prominentibus.*

THE WRINKLED MYCETOPUS. Shell cuneiform, elongated, rather solid, irregularly concentrically ridged, epidermis olive-brown; anterior side produced, narrow, obliquely somewhat inflated, end roundly acuminated, middle compressed; posterior side wider, angular, terminal margin truncated; umboes prominent.

SOWERBY.

Hab. Victoria River, Australia.

In the oblique swelling in front, this species very slightly resembles *M. emarginatus*, but in other characters it is more like *M. siliquosus*. It is, however, cuneate, angular, and wrinkled.

Species 8. (Mus. —— ? copied.)

MYCETOPUS VENTRICOSUS. *Myc. testâ rhomboideâ, tenui, olivaceo-fuscâ, epidermide striatâ; latere antico breviusculo, inflato, suprà cuneato, versus marginem ventralem obliquo, medio depresso, margine ventrali vix concavo; latere postico obtusè biangulato, inter angulos rotundatim inflato, suprà depresso, margine terminali obliquo; umbonibus prominentibus, margine dorsali recto.*

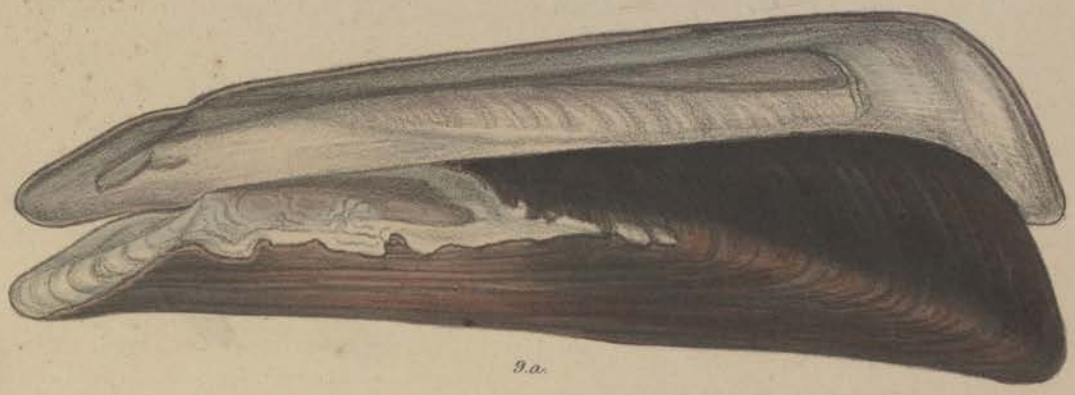
THE VENTRICOSE MYCETOPUS. Shell rhomboidal, thin, olive-brown, epidermis striated; anterior side rather short, inflated, cuneate above, oblique towards the ventral margin, middle depressed, ventral margin very slightly concave; posterior side obtusely biangular, roundly inflated between the angles, depressed above, terminal margin oblique; umboes prominent, dorsal margin straight.

D'ORBIGNY, Voy. Amér. Mérid. pl. 72. f. 2, 3.

Hab. Chiquitos, Bolivia.

Shorter and more rhomboidal than any other species, excepting *M. Weddellii*.

March, 1868.



9.a.

9.b.

10.

Sowerby, del et lith.

Vincent Brooks, Day & Son, Imp.

MYCETOPUS.

PLATE IV.

Species 9. (Fig. *a*, *b*, Mus. Sowerby.)

MYCETOPUS FALCATUS. *Myc. testâ epidermide striatâ, olivaceo-fuscâ indutâ, elongatissimâ, cuneato-soleniformi, tenui; latere postico elongato, obliquè angulato, subexpanso, ad terminum obliquè truncato, margine dorsali recto, ventrali leviter contracto, medio angustato, margine ventrali sinuato, hianti; latere antico in rostrum falcatum acuminatum producto, margine dorsali prope umbones excavato, tum usque ad terminum declivi.*

THE HOOKED MYCETOPUS. Shell covered with a striated, olive-brown epidermis, very long, cuneate-soleniform, thin; posterior side elongated, obliquely angular, subexpanded, obliquely truncated at the end, dorsal margin straight, ventral slightly contracted, middle narrow, with ventral margin sinuated, gaping; anterior side produced into a hooked, acuminated beak, dorsal margin excavated near the umboes, then sloped to the end.

HIGGINS, Pro. Zool. Soc., June, 1868.

Hab. River Amazon.

Several specimens of this very interesting shell having come to hand, it would have been undesirable to omit it, although we had considered the monograph made up. It is a second example of the form represented by *M. emarginatus*, Lea, but it is very angular, and has a produced, acuminated, and curved beak.

Species 10. (Mus. Sowerby.)

MYCETOPUS SUBSINUATUS. *Myc. testâ inflatâ, ventricosâ, tenui, epidermide olivaceâ lævissimâ indutâ; latere postico lato, obliquè rotundatim angulato, margine dorsali recto, ad terminum obliquè subtruncato, margine ventrali convexo, medio subcontracto, subdepresso, paululum sinuato, hianti; latere antico brevi, angusto, rotundato, hianti.*

THE SUBSINUATED MYCETOPUS. Shell inflated, ventricose, thin, covered with an olive, smooth epidermis; posterior side wide, obliquely roundly angular, with dorsal margin straight, obliquely subtruncated at the end, ventral margin convex, middle subcontracted, subdepressed, slightly sinuous, gaping; anterior side short, narrow, rounded, gaping.

SOWERBY.

Hab. Bogota, New Granada.

Among the various degrees of squareness, angularity, narrowness, and ventricosity found in specimens of *Mycetopus siliquoides*, I have met with none resembling this species, in the peculiar ventral sinuous contraction of the anterior side.

MONOGRAPH

OF THE GENUS

IRIDINA.

"But who
Can look Creation's volume through,
And not fresh proofs, at every turn,
Of the Creator's mind discern?"—*Bishop Mant.*

1.

2.

Sowerby del et lith

Vincent Brooks, Imp

IRIDINA.

PLATE I.

Genus IRIDINA.

Testa bivalvis, bimuscolosa, transversa, plus minusve rhomboidea, intùs margaritacea, extùs epidermide lævigatâ induta, margine cardinali recto, laminato, crenulato, vel lævigato; valvulis anticè hiantibus.

Shell bivalve, bimuscular, transverse, more or less rhomboidal, pearly within, covered with a smooth epidermis without, cardinal margin straight, laminar, crenulated, or smooth; valves gaping in front.

The *Iridinæ* are the true African type of "Naiades," although not exclusively so, *I. elongata* representing the river Senegal on the extreme west, and *I. Nilotica* the great stream of the crocodiles on the north-east. The rhomboidal, transverse form and straight cardinal margin are all that distinguish the *Iridinæ* from the *Anodons*. Only one species, the *I. exotica*, has the cardinal margin strongly crenulated, although in *I. Nilotica* a slight crenulation may be observed near the umboes in front.

Species 1. (Mus. Cuming in Brit.)

IRIDINA ELONGATA. *Irid. testâ oblongâ, rhomboideâ, solidâ, subinflatâ, extùs subviridi, lævigatâ, intùs subfusco-iridescenti, margine cardinali crassiusculo, lævigato, posticè obsoletissimè crenato; latere postico paulo latiori, obtusissimè angulato, margine dorsali recto elevato, margine laterali obliquo, termino subtruncato; medio complanato, margine ventrali rectiusculo; latere antico producto, margine dorsali recto, ad terminum subcuneato, margine terminali rotundo.*

THE ELONGATED IRIDINA. Shell oblong, rhomboidal, solid, subinflated, greenish without, smooth, brownish-iridescent within, cardinal margin rather thick, smooth, posteriorly very obsoletely crenated; posterior side a little wider, very obtusely angular, dorsal margin straight, elevated, lateral margin oblique, end subtruncated; middle flattened, ventral margin rather straight; anterior side produced, dorsal margin straight, subcuneate at the end, terminal margin rounded.

SOWERBY, Genera of Shells.

Hab. Senegal.

This is the most rhomboidal of the species, even more so than *I. exotica*. There are only very slight crenulations on the margin.

Species 2. (Mus. Cuming in Brit.)

IRIDINA EXOTICA. *Irid. testâ solidâ, rhomboideâ, subcuneiformi, lævigatâ, intùs rubescenti, iridescenti, margine cardinali recto, tuberculis posticè moniliformibus, anticè dentibus obliquis crenato; latere postico inflato, obtusè angulato, margine dorsali recto, elongato, subelevato, margine laterali declivi, termino rotundo, margine ventrali posticè expanso; medio compresso, margine subsinuato; latere antico angustato, margine dorsali depressso, recto, termino suprà subcuneato.*

THE EXOTIC IRIDINA. Shell solid, rhomboidal, subcuneiform, smooth, reddish-iridescent within, cardinal margin straight, crenated with bead-like tubercles posteriorly, and with oblique teeth in front; posterior side inflated, obtusely angular, dorsal margin straight, elongated, slightly raised, lateral margin sloped, end rounded, ventral margin posteriorly expanded; middle compressed, with subsinuated margin; anterior side narrow, dorsal margin depressed, straight, end subcuneate above.

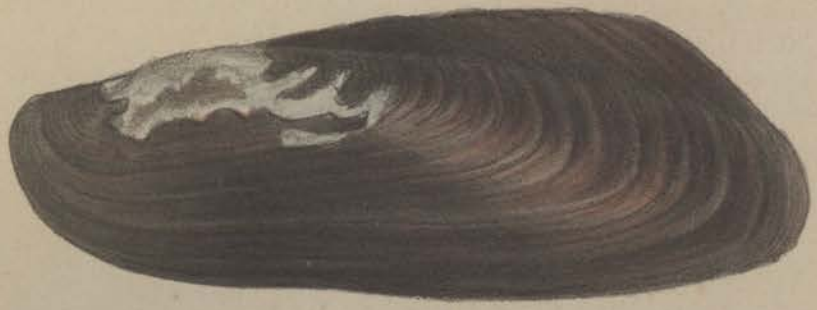
LAMARCK, Anim. sans vert. vol. vi. p. 571; E. M. pl. 204. p. 1.

Hab. Africa.

January, 1868.

3.

4.



5.

Sowerby, del. et lith.

Vincent Brooks, Imp.

IRIDINA.

PLATE II.

Species 3. (Mus. Sowerby.)

IRIDINA CŒLESTIS. *Irid. testâ tenui, subinflatâ, elongatâ, angustâ, utrinque hianti, lævigatâ, profundè olivaceâ, intùs cæruleâ, margine cardinali simplici, lævigato; latere postico producto, obliquè subangulato, termino acuminato, margine dorsali recto, margine laterali perobliquo, margine ventrali ad terminum sursum acclivi, medio subcontracto; latere antico subcuneato, margine dorsali recto.*

THE CELESTIAL IRIDINA. Shell thin, subinflated, elongated, narrow, gaping at both ends, smooth, deep olive, blue within, with cardinal margin simple, smooth; posterior side produced, obliquely subangular, end acuminated, dorsal margin straight, lateral margin very oblique, ventral margin sloped upwards at the end, slightly contracted in the middle; anterior side subcuneate, dorsal margin straight.

LEA, Obs. on Unio, vol. ii. p. 82. pl. 22. f. 70.

Hab. Africa.

This is the least characteristic species of the genus, as it resembles a very much lengthened *Anodon*.

Species 4. (Mus. Sowerby.)

IRIDINA NILOTICA. *Irid. testâ obliquè subcuneiformi, elongatâ, anticè hianti, tenui, leviter concentricè rugatâ, olivaceâ, intùs viridè iridescenti, margine cardinali lævigato, anticè obsoletissimè crenulato; latere postico expanso, rotundatim angulato, obliquè inflato, margine dorsali elevato, margine laterali obliquo, termino acuminatim rotundato; medio depresso, gradatim contracto, margine dorsali sinuato; latere antico angusto, acuminato.*

THE NILE IRIDINA. Shell obliquely subcuneiform, elongated, gaping in front, thin, lightly concentrically wrinkled, olive, brightly iridescent within, cardinal margin smooth, anteriorly very obsoletely crenulated; posterior side expanded, roundly angular, obliquely inflated, dorsal margin elevated, lateral margin oblique, end acuminately rounded; middle depressed, gradually contracted, dorsal margin sinuated; anterior side narrow, acuminated.

SOWERBY, Zoological Journal, vol. v. pl. 2.

Anodon dubia, Bosc.

Iridina Oudnici, Den.

Hab. Senaar.

More cuneiform and more inflated than *Iridina elongata*, which is of a more rhomboidal form.

Species 5. (Mus. Sowerby.)

IRIDINA ANGUSTATA. *Irid. testâ elongatâ, angustatâ, subcuneiformi, anticè hianti, profundè olivaceâ, lævigatâ, intùs cæruleo-iridescenti, margine cardinali lævigatâ; latere postico subexpanso, subalato, obliquè inflato et rotundatim angulato, areâ postangulari depresso, margine dorsali recto, subelevato, margine laterali obliquo, termino truncato; medio gradatim angustato, margine rectiusculo; latere antico producto, angusto, margine dorsali depresso, termino suprà cuneato.*

THE NARROW IRIDINA. Shell elongated, narrow, subcuneiform, gaping in front, deep olive, smooth, blue-iridescent within, cardinal margin smooth; posterior side subexpanded, subalate, oblique, inflated and roundedly angular, postangular area depressed, dorsal margin straight, slightly raised, lateral margin oblique, end truncated; middle gradually narrowed, margin rather straight; anterior side produced, narrow, dorsal margin depressed, end cuneate above.

SOWERBY.

Hab. Africa?

Much narrower and less oblique than *Iridina Nilotica*.

MONOGRAPH

OF THE GENUS

HAMINEA

"Thus learn we Bounty's lore
Along the unbounded shore."—*Keble.*

1.a.

2.

3.

4.a.

5.a.

5.b.

4.b.

6

7.

1.b.

Sowerby, del et lith.

Vincent Brooks, Imp.

HAMINEA.

PLATE I.

Genus HAMINEA, *Leach.*

Testa convoluta, ovata, tenuis, plerumque cornea, spirâ cælatâ; labio interno tenuissimo, columellâ arcuatâ; labro supra spiram elevato.

Shell convolute, ovate, thin, generally horny, with spire concealed; inner lip very thin, with columella curved; outer lip elevated above the spire.

It would be difficult to name a genus of shells consisting of so few known species being found living in so many and such distant parts of the world. The thirty-two species described in this Monograph range from Great Britain in the north to Australia in the south, from eastern to western seas. South Africa, North America, India, China, Borneo, and the Philippines, all contribute their one or more species, the known number of which must be increased as the numerous localities come to be explored. The shells of *Haminea* and *Bulla* differ principally in the horny texture of the former, as compared to the porcellaneous structure of the latter; but the animals differ very widely in many respects.

Species 1. (Fig. *a*, *b*, Mus. Cuming in Brit.)

HAMINEA INSCULPTA. *Ham. testâ albidâ, fragili, subcylindricâ, anticè semi-ovatâ, posticè subattenuatâ, subtruncatâ, omnino minutè transversim striatâ; apice umbilicato; columellâ arcuatâ; labro anticè vix dilatato.*

THE ENGRAVED HAMINEA. Shell whitish, fragile, subcylindrical, half-oval in front, slightly narrowed and subtruncate behind, everywhere minutely transversely striated; apex umbilicated; columella arched; outer lip very slightly expanded anteriorly.

TOTTEN, Silliman's Journal, vol. xxviii. p. 350. f. 4.
Bulla solitaria, Say.
Bulla Reinhardi, Holbein.
Hab. North America.

Species 2. (Mus. Cuming in Brit.)

HAMINEA ORYZA. *Ham. testâ parvâ, albâ, subsolidâ, cylindraceâ, anticè et posticè striis transversis paucis sculptâ, medio planâ; apice depresso, angusto.*

THE RICE HAMINEA. Shell small, white, rather solid, cylindrical, anteriorly and posteriorly sculptured with few transverse striæ, plain in the middle; apex depressed, narrow.

Hab. Massachusetts.

This small, white, cylindrical species approaches in form to the genus *Atys*.

Species 3. (Mus. Cuming in Brit.)

HAMINEA TENERA. *Ham. testâ tenui, politâ, fulvâ, subcorneâ, curtâ, subcylindraceâ, posticè paulo angustatâ; apice truncato, anticè paulo expanso; lateribus rectiusculis; columellâ rotundâ, arcuatâ, albâ.*

THE THIN HAMINEA. Shell thin, polished, fulvous, rather horny, short, subcylindrical, a little narrowed posteriorly, with the end truncated, a little expanded anteriorly; sides rather straight; columella rounded, arched, white.

A. ADAMS, Thes. Conch. Bulla, sp. 75.
Hab. —— ?

Species 4. (Fig. *a*, *b*, Mus. Cuming in Brit.)

HAMINEA HYDATIS. *Ham. testâ rotundato-subcylindricâ, brevi, inflatâ, corneâ, subviridi, epidermide ferrugineâ, tenui indutâ, minutissimè striatâ; apice umbilicato, subtruncato; labro posticè subangulato, supra medium obliquè producto; columellâ subtortuâ.*

THE BLADDER HAMINEA. Shell rounded-subcylindrical, short, inflated, horny, greenish, covered with thin, ferruginous epidermis, very minutely striated; apex umbilicated, subtruncated; outer lip subangular, obliquely produced above the middle; columella slightly tortuous.

LINNÆUS, Systema Naturæ.
Bulla hyalina, Gmelin.
Bulla navicula, Costa.
Bulla cornea, Lamarck.
Hab. Great Britain.

Species 5. (Fig. *a*, *b*, Mus. Cuming in Brit.)

HAMINEA GUILDINGII. *Ham. testâ subcylindricâ, brevi, inflatâ, transversè striatâ, albâ seu fulvâ seu pallidè rosaceâ; apice latè truncato, umbilicato; aperturâ posticè angustâ, anticè amplâ; columellâ tortuâ, arcuatâ.*

GUILDING'S HAMINEA. Shell subcylindrical, short, inflated, transversely striated, white or fulvous or pale rose; apex widely truncated, umbilicated; aperture posteriorly narrow, anteriorly wide; columella tortuous, arched.

SWAINSON (*Bullæa*), Malacology, p. 251. f. 90.

Hab. West Indies.

Rather more cylindrical in form than *Haminea Hydatis*, and distinguished by numerous deeply-indented striæ.

Species 6. (Mus. Cuming in Brit.)

HAMINEA NOVÆ-EBORACI. *Ham. testâ oblongo-ovatâ. tenui, albâ, minutissimè transversè striatâ, posticè angustatâ, umbilicatâ, anticè magis inflatâ; aperturâ supra apicem elevatâ, subcuneatâ; columellâ tortuâ, arcuatâ, subplicatâ.*

THE NEW YORK HAMINEA. Shell oblong-ovate, thin, white, very minutely transversely striated, posteriorly narrow, umbilicated, anteriorly more inflated; aperture elevated above the apex, subcuneate; columella tortuous, arched, with a very slight fold.

SOWERBY.

Hab. New York.

Species 7. (Mus. Cuming in Brit.)

HAMINEA NATALENSIS. *Ham. testâ tenui, corneâ, subcuneatâ, pallidè fulvâ, posticè attenuatâ, lateribus compressis; apice latè truncato, umbilicato, anticè inflato, expanso; columellâ arcuatâ, subsolidâ, subplicatâ.*

THE NATAL HAMINEA. Shell thin, horny, subcuneate, pale fulvous, posteriorly attenuated, with sides compressed; apex widely truncated, umbilicated, anteriorly inflated, expanded; columella arched, subsolid, with a slight fold.

SOWERBY.

Hab. Port Natal.

More compressed at the side than *Haminea elegans*, but not inflated like *H. constricta*.

8.

9.a.

9.b.

10.a.

11.a.

11.b.

10.b.

12.a.

12.b.

13.

HAMINEA.

PLATE II.

Species 8. (Mus. Cuming in Brit.)

HAMINEA VITREA. *Ham. testâ ovato-cylindraceâ, albâ, tenui, pellucidâ, politâ, sub lente minutissimè striatâ; lateribus rectiusculis, umbilico parvo; labro supernè subelevato, infernè subexpanso; columellâ rectiusculâ.*

THE VITREOUS HAMINEA. Shell ovate-cylindrical, white, thin, pellucid, polished, under the lens very finely striated, sides rather straight, umbilicus small; outer lip slightly elevated above, a little expanded below; columella rather straight.

ARTHUR ADAMS, Sowerby's Thesaurus, Bulla, sp. 72. f. 102.

Hab. Cagayan, island of Mindinao; island of Luzon, Philippines.

This little shell appears quite glossy and polished to the eye, but on examination under the lens is found to be very finely striated.

Species 9. (Fig. *a*, *b*, Mus. Cuming in Brit.)

HAMINEA ROTUNDA. *Ham. testâ subglobosâ, tenui, spiraliter minutissimè striatâ, pallidissimè roseâ, obliquè strigatâ, epidermide ferruginosâ; lateribus convexis, umbilico angusto, profundo; columellâ tortuâ, arcuatâ, suprà prominenti; labro semiovato.*

THE ROUNDED HAMINEA. Shell subglobose, thin, spirally very minutely striated, very pale rose, obliquely striped, epidermis ferruginous; sides convex, umbilicus narrow, deep; columella tortuous, arched, prominent above; outer lip semiovate.

ARTHUR ADAMS, Sowerby's Thesaurus, Bulla, sp. 77. fig. 105.

Hab. ——?

This species is distinguished by its globose form, as well as by the obliquity of the stripes and lines of growth.

Species 10. (Fig. *a*, *b*, Mus. Cuming in Brit.)

HAMINEA FUSCA. *Ham. testâ subovatâ, tenui, tenuissimè interruptim irregulariter et subundulatim striatâ, intus fulvâ, extus fusco-ferrugineâ; lateribus rectiusculis; aperturâ pyriformi, labro supernè elevato, subacuminato, prope terminum superiorem producto; columellâ arcuatâ.*

THE BROWN HAMINEA. Shell subovate, thin, very finely interruptedly irregularly and wavily striated, fawn-coloured within, iron-brown without; sides rather straight; aperture pyriform, outer lip elevated above, subacuminated, produced near the upper terminus; columella arched.

ARTHUR ADAMS, Sowerby's Thesaurus, Bulla, 66. f. 94.. *Hab.* Cagayan, island of Mindinao, Philippines.

A specimen of this species, which rather resembles *Haminea hydatis*, was taken by Mr. Cuming in sandy mud at a depth of twenty-five fathoms.

Species 11. (Fig. *a*, *b*, Mus. Cuming in Brit.)

HAMINEA ELEGANS. *Ham. testâ oblongo-ovatâ, olivaceâ aut fuscâ, concentricè minutissimè striatâ, posticè angustatâ, anticè subexpansâ, post columellam excavatâ; umbilico latiusculo, lateribus rectiusculis, columellâ arcuatâ; aperturâ posticè angustatâ, elevatâ, acuminatâ; labro eleganter supra medium arcuatim producto.*

THE ELEGANT HAMINEA. Shell oblong-ovate, olive or brown, very finely concentrically striated, posteriorly narrow, anteriorly a little expanded, hollowed behind the columella; umbilicus rather wide, sides rather straight, columella arched; aperture posteriorly narrowed, elevated, acuminated; outer lip elegantly produced and arched over above the centre.

ARTHUR ADAMS, Sowerby's Thesaurus, Bulla, 64. f. 92. *Hab.* Manilla; Cuming.

A very date-like species, rather acuminated above.

Species 12. (Fig. *a*, *b*, Mus. Cuming in Brit.)

HAMINEA PEMPHIX. *Ham. testâ ovato-globosâ, lævigatâ, curtâ, suprà obliquè tenuiter rugatâ, albidâ, epidermide tenui pallidâ indutâ, anticè latâ; umbilico parvo, profundo, lateribus rotundis; labro supernè vix cuneato; columellâ latâ, rectiusculâ.*

THE PUSTULE HAMINEA. Shell ovate-globose, smooth,

short, obliquely thinly wrinkled above, whitish, covered with a thin pale epidermis, broad in front; umbilicus small, deep, sides rounded; outer lip very little excavated above; columella broad, rather straight.

Philippi, Zeitschrift für Mal. 1847. p. 122.

Hab. Red Sea; Cuming.

A rather small, very globose, smooth shell.

Species 13. (Mus. Cuming in Brit.)

Haminea obesa. *Ham. testâ curtâ, latâ, subglobosâ, lævigatâ, supernè obliquè leviter rugatâ, pallidè fulvâ, intus albâ, posticè paulo angustiore; umbilico lato; columellâ latâ, arcuatâ; labro supernè subquadrato, medio retiusculo.*

The obese Haminea. Shell short, broad, subglobose, smooth, lightly and obliquely wrinkled above, pale fulvous, white within, a little narrowed posteriorly; umbilicus broad; columella broad, arched; outer lip squarish above, rather straight in the middle.

Sowerby.

Hab. New Zealand.

This shell resembles the preceding, but is more inflated, and, being more truncated above and a little straighter in the outer lip, has a more cylindrical appearance.

14.

15. a.

15. b.

16. a.

17. a.

17. b.

16 b

18. a.

18. b.

19.

HAMINEA.

PLATE III.

Species 14. (Mus. Cuming in Brit.)

HAMINEA GUADALOUPENSIS. *Ham. testâ tenui, viridi, subpellucidâ, subglobosâ, expansâ, posticè angustatâ, apice umbilicato, rotundo, anticè latè expansâ, subpatulâ; labio elevato, supra medium subcontracto; columellâ tenuissimâ, arcuatâ.*

THE GUADALOUPE HAMINEA. Shell thin, green, subpellucid, subglobose, expanded, posteriorly narrow, with apex umbilicated, rounded, anteriorly widely expanded, subpatulous; outer lip elevated, subcontracted above the middle, columella very thin, arched.

SOWERBY.

Hab. Guadaloupe.

This charming little shell differs from *Haminea virescens* in being much more globose.

Species 15. (Fig. *a*, *b*, Mus. Cuming in Brit.)

HAMINEA BREVIS. *Ham. testâ albâ, tenui, cylindricâ, utrinque subtruncatâ, tenuissimè striatâ; apice latè truncato, umbilicato; labro ad apicem subquadrato; lateribus rectis; anfractu ultimo post columellam depresso.*

THE SHORT HAMINEA. Shell white, thin, cylindrical, subtruncated at both ends, very finely striated; apex widely truncated, umbilicated; outer lip rather square at the apex; sides straight; last whorl depressed behind the columella.

QUOY et GAIMARD, Voyage de l'Astrolabe, pl. 26, f. 36, 37.

Hab. New Holland; Port St. George.

Species 16. (Fig. *a*, *b*, Mus. Cuming in Brit.)

HAMINEA CONSTRICTA. *Ham. testâ ovato-subcylindricâ, tenui, pellucidâ, corneâ, aurantio-fulvâ, lævi, posticè attenuatâ, supra medium constrictâ; apice depresso, subumbilicato; labio externo elevato, anticè expanso, inflato; columellâ subsolidâ, rectiusculâ.*

THE CONSTRICTED HAMINEA. Shell ovate-subcylindrical, thin, pellucid, horny, orange-fulvous, smooth, attenuated posteriorly, constricted above the middle; apex depressed, subumbilicated, with outer lip raised, anteriorly expanded, inflated; columella rather solid, nearly straight.

A. ADAMS, MS.

Hab. ——?

It is to be regretted that the locality of this species is unknown.

Species 17. (Fig. *a*, *b*, Mus. Cuming in Brit.)

HAMINEA PAPYRUS. *Ham. testâ albâ, cylindricâ, striis subdistantibus sculptâ; terminibus truncatis; lateribus rectis; apice recto, depresso; labio suprà subquadrato, medio subcontracto; columellâ subsolidâ.*

THE PAPYRUS HAMINEA. Shell white, cylindrical, engraved with rather distant lines; ends truncated: sides straight; apex straight, depressed; outer lip subquadrate above, subcontracted in the middle; columella rather solid.

A. ADAMS, Sowerby's Thesaurus Conchyliorum, Bulla, sp. 73, f. 101.

Hab. Shores of Borneo.

The shell is so named from its appearance resembling that of a little roll of paper.

Species 18. (Fig. *a*, *b*, Mus. Cuming in Brit.)

HAMINEA TENELLA. *Ham. testâ ovatâ, pellucidâ, tenui, lævigatâ, pallidè fulvâ, posticè subattenuatâ; medio inflato; apice umbilicato; aperturâ subpyriformi; columellâ tenuissimâ, arcuatâ; labio ad apicem rotundato, elevato.*

THE THIN LITTLE HAMINEA. Shell ovate, pellucid, thin, smooth, pale fulvous, slightly attenuated behind; middle inflated; apex umbilicated; aperture subpyriform; columella arched, very thin; outer lip at the apex round, elevated.

A. ADAMS, Sowerby's Thesaurus Conchyliorum, Bulla, sp. 76. f. 104.

Hab. ——?

Species 19. (Mus. Cuming in Brit.)

HAMINEA VESICULA. *Ham. testâ ovatâ, tenui, semi-*

pellucidâ, lævissimâ, fulvâ, subviridi; apice profundè umbilicato; aperturâ semi-ovatâ; labio supra apicem elevato, rotundatim subacuminato; columellâ valde arcuatâ.

THE BUBBLE HAMINEA. Shell oval, thin, semipellucid, very smooth, fulvous greenish; apex deeply umbilicated; aperture half-oval; outer lip elevated above the apex, roundly subacuminate; columella strongly arched.

GOULD, Proc. Zool. Soc. 1856, p. 203.

Hab. —— ?

20. a.

20. b.

20. c.

21. a.

22. a.

22. b.

21. b.

23. a.

23. b.

24.

HAMINEA.

PLATE IV.

Species 20. (Fig. *a*, *b*, *c*, Mus. Cuming in Brit.)

HAMINEA CYMBALUM. *Ham. testâ albâ, fragili, ovali, lævi, posticè paulo angustatâ, excavatâ; aperturâ posticè angustâ, labio supra medium subinflexo, anticè lato; columellâ rectiusculâ.*

THE CYMBAL HAMINEA. Shell white, fragile, oval, smooth, posteriorly a little narrowed, excavated; aperture posteriorly narrow, with outer lip a little inflexed above the middle, wide anteriorly; columella nearly straight.

QUOY et GAIMARD, Voyage de l'Astrolabe, pl. 26. f. 26, 27.

Hab. Island of Guam.

This beautiful, half-transparent, oval, polished species, Fig. *a*, represents a young specimen, of a light horn-colour.

Species 21. (Fig. *a*, *b*, Mus. Cuming in Brit.)

HAMINEA SINENSIS. *Ham. testâ apertâ, subpatulâ, albâ, tenui, subdistanter transversè striatâ, semiopacâ, versus apicem angustatâ, anticè latè expansâ; aperturâ magnâ; labro super apicem elevatâ, subacuminatâ, apice umbilicato; columellâ subplicatâ.*

THE CHINESE HAMINEA. Shell open, subpatulous, white, thin, rather distantly transversely striated, semiopake, narrow towards the apex, anteriorly widely expanded; aperture large; outer lip elevated above the apex, subacuminated; apex umbilicated; columella subplicated.

ARTHUR ADAMS, Sowerby's Thesaurus Conchyliorum; Bulla, sp. 70, f. 98.

Hab. ——?

This shell so much resembles the shells of *Philine*, that it is only placed in this genus on the authority of Mr. Adams, believed to be based on a knowledge of the animal.

Species 22. (Fig. *a*, *b*, Mus. Cuming in Brit.)

HAMINEA VIRESCENS. *Ham. testâ apertâ, subpyramidatâ, patulâ, viridi, semipellucidâ, supra medium contractâ, supra spiram elevatâ, acuminatâ, minutissimè transversè striatâ; aperturâ anticè validè expansâ; columellâ perobliquè arcuatâ.*

THE GREENISH HAMINEA. Shell open, subpyramidal, patulous, green, semipellucid, contracted above the middle, elevated above the spire, acuminated, very minutely transversely striated; aperture anteriorly largely expanded; columella very obliquely arched.

SOWERBY, Genera of Shells.

Hab. Pitcairn's Island.

This is another species approaching the *Philine* form, but of a rather horny texture and green colour.

Species 23. (Fig. *a*, *b*, Mus. Cuming in Brit.)

HAMINEA GALBA. *Ham. testâ corneâ, lævigatâ, aurantio-fulvâ, oblongo-ovatâ, posticè paulo angustatâ, apice umbilicato; labro supra apicem perelevato, acuminatim rotundo; aperturâ anticè latiusculâ, rotundâ; columellâ conspicuè uniplicatâ.*

THE GALBA HAMINEA. Shell horny, smooth, orange-fulvous, oblong-ovate, posteriorly slightly narrowed, apex umbilicated; outer lip much elevated above the spire, acuminately rounded; aperture anteriorly rather wide, round; columella distinctly plicated.

PEASE ——?

Hab. ——?

More elongated and less cylindrical than *Haminea crocata*.

Species 24. (Mus. Cuming in Brit.)

HAMINEA SANDWICHENSIS. *Ham. testâ pellucidâ, albâ, lævigatâ, ovatâ, utrinque rotundatim subacuminata, apice umbilicato; aperturâ subangustâ; columellâ rectiusculâ, subplicatâ.*

THE SANDWICH ISLANDS HAMINEA. Shell pellucid, white, smooth, ovate, roundly subacuminate at each end, apex umbilicated; aperture rather narrow; columella rather straight, with a slight plait.

SOWERBY.

Hab. Sandwich Islands.

Differing from *Haminea galba* in colour, in being more ovate and more acuminate at the ends.

25.

26.

27.

28.

29.

29. b.

30.

31. a.

31. b.

32.

HAMINEA.

PLATE V.

Species 25. (Mus., late Metcalfe.)

HAMINEA SUCCINEA. *Ham. testâ cylindricâ, parvâ, tenui, diaphanâ, minutissimè transversè striatâ; columellâ rectiusculâ, ultimo anfractu post columellam concavâ; labro recto, apice truncato; aperturâ anticè rotundato.*

THE AMBER HAMINEA. Shell cylindrical, small, thin, diaphanous, very minutely transversely striated; columella rather straight, last whorl concave behind the columella; outer lip straight, apex truncated; aperture rounded anteriorly.

CONRAD, Proc. Acad. Nat. Soc. Philadelphia, 1846.

Hab. Tampa Bay.

Species 26. (Mus. Cuming in Brit.)

HAMINEA AMBIGUA. *Ham. testâ parvâ, albâ, transversè striatâ, tenuissimâ, elongato-cylindricâ; aperturâ angustâ, rectâ, apice angusto, concavo; columellâ rectiusculâ.*

THE AMBIGUOUS HAMINEA. Shell small, white, transversely striated, very thin, elongate-cylindrical; aperture narrow, straight; apex narrow, concave; columella nearly straight.

A. ADAMS, Sowerby's Thesaurus Conchyliorum; Bulla, sp. 69. fig. 97.

Hab. Port King George, New Ireland.

This species is rather like an *Atys* in the form of the shell.

Species 27. (Mus. Cuming in Brit.)

HAMINEA GLABRA. *Ham. testâ parvâ, albâ, solidiusculâ, nitenti, striis tenuissimis subdistantibus insculptâ, ovato-cylindraceâ, curtâ, utrinque latè truncatâ; aperturâ anticè dilatatâ; columellâ tenuissimâ, rectiusculâ.*

THE SHINING HAMINEA. Shell small, white, rather solid, shining, sculptured with very fine, rather distant striæ, ovate-cylindrical, short, broadly truncated at both ends; aperture anteriorly dilated; columella very thin, rather straight.

A. ADAMS, Sowerby's Thesaurus Conchyliorum; Bulla, sp. 68. f. 96.

Hab. ——?

The locality of this interesting little species is not known.

Species 28. (Mus., late Metcalfe.)

HAMINEA CASTANEA. *Ham. testâ ovatâ, solidiusculâ, griseâ, lævigatâ, epidermide ferrugineâ indutâ, versus apicem subangustatâ, anticè leviter dilatatâ; apice umbilicato; labro supra apicem rotundo; columellâ albâ, rectiusculâ, anticè attenuatâ.*

THE CHESTNUT HAMINEA. Shell ovate, rather solid, grey, smooth, covered with a ferruginous epidermis, rather narrowed towards the apex, anteriorly slightly expanded; apex umbilicated; outer lip rounded above the apex; columella white, rather straight, attenuated anteriorly.

A. ADAMS, Sowerby's Thesaurus Conchyliorum; Bulla, sp. 78, *a*, f. 106, *a*.

Hab. ——?

Species 29. (Fig *a*, *b*, Mus. Cuming in Brit.)

HAMINEA CROCATA. *Ham. testâ tenui, politâ, aurantio-fulvâ, subcorneâ, oblongâ, subcylindraceâ, posticè angustatâ, lateribus rectis; apice umbilicato; labro supra apicem rotundatim elevato; aperturâ anticè expanso; columellâ arcuatâ, albâ.*

THE SAFFRON HAMINEA. Shell thin, polished, orange-fulvous, subcorneous, oblong, subcylindrical, narrowed posteriorly with straight sides; apex umbilicated; outer lip above the apex roundly elevated; aperture anteriorly expanded; columella arched, white.

PEASE, Pro. Zool. Soc. 1860, p. 19.

Hab. ——?

Species 30. (Mus. Cuming in Brit.)

HAMINEA FERRUGINEA. *Ham. testâ ovatâ, tenui, ferrugineâ, inflatâ, posticè subangustatâ; apice rotundato, umbilicato; labio externo supra apicem elevato, subacuminato, supra medium perobliquè producto; aperturâ anticè rotundatâ; columellâ validè arcuatâ.*

THE FERRUGINOUS HAMINEA. Shell ovate, thin, ferruginous, inflated, posteriorly slightly narrowed; apex rounded, umbilicated; outer lip elevated above the

apex, rather acuminated, above the middle very obliquely produced; aperture anteriorly rounded; columella strongly arched.

Chemnitz, Conch. vol. i. t. 24. f. 209, 210.

Hab. —— ?

Species 31. (Fig. *a*, *b*, Mus. Cuming in Brit.)

Haminea flavescens. *Ham. testâ parvâ, cylindricâ, curtâ, utrinque subtruncatâ, pellucidâ, subflavidâ, minutissimè transversè striatâ; labro posticè subangulato, anticè rotundo; columellâ moderatè arcuatâ.*

The yellowish Haminea. Shell small, cylindrical, short, slightly truncated at both ends, pellucid, yellowish, very minutely transversely striated; outer lip posteriorly subangular, anteriorly rounded; columella moderately arched.

A. Adams, Sowerby's Thesaurus Conchyliorum; Bulla, sp. 71. f. 99.

Hab. —— ?

Species 32. (Mus. Cuming in Brit.)

Haminea angustata. *Ham. testâ parvâ, subsolidâ, cylindraceâ, angustâ, lævigatâ, albâ, posticè subacuminatâ, subangustatâ, lateribus rectis; aperturâ angustâ, anticè rotundatâ; columellâ rectiusculâ.*

The narrow Haminea. Shell small, rather solid, cylindrical, narrow, smooth, white, posteriorly subacuminated, rather narrowed, sides straight; aperture narrow, anteriorly rounded; columella rather straight.

Gould, MS.

Hab. Simonda, Western States of North America.

HAMINEA.

	Plate.	Species.
ambigua, *A. Adams*	V.	26
angustata, *Gould*	V.	32
brevis, *Quoy*	III.	15
castanea, *A. Adams*	V.	28
constricta, *A. Adams*	III.	16
cornea, Lamarck	I	4
crocata, *Pease*	V.	29
Cymbalum, *Quoy*	IV.	20
elegans, *A. Adams*	II.	11
ferruginea, *Gould*	V.	30
flavescens, *A. Adams*	V.	31
fusca, *A. Adams*	II.	10
Galba, *Pease*	IV.	23
glabra, *A. Adams*	V.	27
Guadaloupensis, *Sowerby*	III.	14
Guildingii, *Swain*	I.	5
hyalina, Gmelin	I.	4
hydatis, *Linnæus*	I.	4
insculpta, *Totten*	I.	1
Natalensis, *Sowerby*	I.	7
navicula, Costa	I.	4
Novi-Eboraci, *Sowerby*	I.	6
obesa, *Sowerby*	II.	13
oryza, *Gould*	I.	2
papyrus, *A. Adams*	III.	17
pemphix, *Phil.*	II.	12
Reinhardi, *Holb.*	I.	1
rotunda, *A. Adams*	II.	9
Sandwichensis, *Sowerby*	IV.	24
Sinensis, *A. Adams*	IV.	21
solitaria, Say	I.	1
succinea, *Conrad*	V.	25
tenella, *A. Adams*	III.	18
tenera, *A. Adams*	I.	3
vesicula, *Gould*	III.	19
virescens, *Sowerby*	IV.	22
vitrea, *A. Adams*	II.	8

MONOGRAPH

OF THE GENUS

HYDATINA.

"On my life, my lord, a bubble."—*Shakespeare.*

1.a.

2.c.

2.d.

2.e.

2.a.

2.b.

1.b.

Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

HYDATINA.

PLATE I.

Genus HYDATINA.

Testa ovali-globosa, valde ventricosa, spirâ depressiusculâ; aperturâ amplâ, posticè coarctatâ; labium externum tenue, acutum; labium internum tenuissimum, replicato-adnatum; anfractus ultimus inflatus.

Shell ovate-globose, very ventricose, spire rather depressed; aperture wide, contracted posteriorly; outer lip thin, acute; inner lip very thin, united and reflected; last whorl inflated.

The Mauritius, Ceylon, China, and St. Vincent's, in the West Indies, are the stated habitats of the four species of *Hydatina* at present known. They are nearly convolute shells, the earliest whorls being sunk even where the penultimate is accidentally or specifically exserted. In this respect they differ from shells of the genus *Aplustrum*, although the animals of the two genera resemble each other very closely.

Species 1. (Fig. 1, 2, Mus. Cuming in Brit.)

HYDATINA NITIDULA. *Hyd. testâ ovatâ, pallidè fulvâ vel griseâ, lineis tribus transversis rubris vel rubro-fuscis, lineisque longitudinalibus undulatis concoloribus pictâ, transversè striatâ, striis subdistantibus punctatis, spirâ prominulâ; apice obtuso, aperturâ amplâ, posticè angustatâ, anticè validè dilatatâ; columellâ arcuatâ, anticè rotundatâ.*

THE NEAT LITTLE HYDATINA. Shell ovate, pale fawn or grey, painted with three red or reddish-brown transverse lines, and longitudinal undulating lines of the same colour, transversely striated, striæ subdistant, punctured, spire a little prominent with obtuse apex; aperture large, narrowed posteriorly, much widened anteriorly; columella arched, rounded anteriorly.

LISTER, Hist. Conch. t. 715. f. 74.

Bulla Ferussacii, Quoy.

Hab. The Mauritius.

The three neatly-arranged red spiral lines, crossed by undulating concentric ones, distinguish this shell as among the most beautiful of the genus.

Species 2. (Fig. *a, b, c, d, e*, Mus. Cuming in Brit.)

HYDATINA PHYSIS. *Hyd. testâ ovato-rotundatâ, tenui, semipellucidâ, lævigatâ, albidâ, lineis inæqualibus transversis nigrescentibus pictâ, spirâ concavâ; aperturâ magnâ, anticè dilatatâ; variat lineis rubescentibus undulatis concentricis.*

THE PHYSIS HYDATINA. Shell ovate-rounded, thin, semipellucid, smooth, whitish, painted with unequal transverse blackish lines, spire concave; aperture large, dilated in front; it varies with undulating, concentric, reddish lines.

LINNÆUS, Systema Naturæ.

Hydatina filosa, Schum.

Hab. The Mauritius; found on clear sand.

3.a.

4.a.

4.b.

3.b.

4.c.

4.d.

3.c.

Sowerby, del. et. lith.

Vincent Brooks, Day & Son, Imp.

HYDATINA.

PLATE. II.

Species 3. (Fig. *a*, *b*, *c*, Mus. Cuming in Brit.)

HYDATINA ALBO-CINCTA. *Hyd. testâ subglobosâ, inflatâ, tenui, semipellucidâ, fusco-cinerascente, fasciis tribus latis albis radiatâ et striis obliquis, fuscis, numerosis, longitudinalibus pictâ, spirâ retusâ, concavâ; aperturâ anticè amplissimâ.*

THE WHITE-BANDED HYDATINA. Shell subglobose, inflated, thin, semipellucid, brownish ash-coloured, rayed with three broad white bands, and painted with oblique, brown, numerous, longitudinal striæ, spire retuse, concave; aperture very wide in front.

HOEVEN, 'Leyden Journal of Natural History.'

Hab. China.

The larger part of the surface in this shell is covered with greyish-brown, obliquely striped, the insterstices forming white bands. It is not quite so globose as the following species, and more contracted at the spiral end.

Species 4. (Fig. *a*, *b*, *c*, *d*, Mus. Cuming in Brit.)

HYDATINA VEXILLUM. *Hyd. testâ globosâ, tenui, semipellucidâ, cinerascenti, fasciis fuscis aut nigris nonnunquam linearibus quatuor radiatâ, strigis longitudinalibus tenuibus fuscis aut griseis etiam pictâ; aperturâ magnâ.*

THE FLAG HYDATINA. Shell globose, thin, semipellucid, ashy-grey, rayed with four black, brown, or sometimes linear-brown bands, also painted with thin longitudinal brown or grey stripes, aperture large.

CHEMNITZ, Conch. vol. x. t. 146. 1348, 1349.

Bulla fasciata, Bruguière.

Bulla velum, Gmelin.

Hab. Ceylon.

This species is more globose and less contracted at the spine than *Hydatina Physis*.

MONOGRAPH

OF THE GENUS

APLUSTRUM.

"Through knowledge we behold the world's creation."

Spenser.

1.

2.a.

2.b.

2.c.

2.d.

2.e.

3.a.

2.f.

2.g.

3.b.

Sowerby. del et lith.

Vincent Brooks, Day & Son, Imp.

APLUSTRUM.

PLATE I.

Genus APLUSTRUM.

Testa globoso-ovata, spirâ productâ, planiusculâ; apertura oblonga, subcanaliculata, subemarginata, labium internum nullum; columella prominens, involuta, subtortua, obliquè truncata, margine interno tenuissimo, subreplicato; umbilicus nullus.

Shell globosely ovate, with produced, rather flattened spire; aperture oblong, with a slight canal, subemarginated, inner lip none; columella prominent, involute, slightly tortuous, obliquely truncated, internal margin very thin, somewhat reflected; no umbilicus.

The species *Bulla aplustre*, of authors, upon which this genus is founded, is from the Mauritius. The other two smaller species, very doubtfully admitted in the genus, are both from the United States of America. The animal is similar to that of *Hydatina*, from which the shell differs in having a produced spire in which all the whorls are visible.

Species 1. (Mus. —— ? copied.)

APLUSTRUM GOULDII. *Apl. testâ parvâ, ovatâ, convolutâ, fragili, pallidâ, nitidâ, semipellucidâ, transversè leviter striatâ; spirâ depressâ, discoideâ, imperforatâ, interdum prominulâ, anfractibus quatuor, supernè rotundatis, suturis impressis; aperturâ suprà angustâ, versus basin dilatatâ; columellâ arcuatâ, albâ, nitidâ, imperforatâ.*

GOULD'S APLUSTRUM. Shell small, ovate, convolute, fragile, pale, smooth, semipellucid, transversely slightly striated; spire depressed, discoidal, imperforate, sometimes prominent, whorls four, rounded above, with sutures impressed; aperture narrow above, dilated towards the base; columella arched, white, smooth, imperforate.

CONTHOY, Boston Journal of Natural History, vol. ii. p. 182. pl. 4. f. 6.

Hab. Massachusetts Bay, United States.

Species 2. (Fig. *a–g*, Mus. Cuming in Brit.)

APLUSTRUM THALASSIARCHI. *Apl. testâ ovatâ, subturbinatâ, lævigatâ, tenui, fasciis latis roseis et lineis nigris marginatis cinctâ, spirâ productâ, subplanatâ, anfractibus rotundatis; aperturâ anticè canaliculatâ; columellâ tenui, reflexâ.*

THE ADMIRAL'S APLUSTRUM. Shell ovate, subturbinate, smooth, thin, girt with wide rose-coloured bands and black lines; spire produced, rather flattened, with rounded whorls; aperture with a canal in front; columella thin, reflected.

MARTINI, Chemn., vol. x. t. 146. f. 1350, 1351.

Aplustrum fasciatum, Schum.

Bulla aplustre, Linn., Lamk., etc.

Aplustra pulchella, Swains.

Hab. Mauritius; in mud at mouths of rivers.

The number and distance of the black lines which edge the broad pink bands are much varied in this species.

Species 3. (Mus. Cuming in Brit.)

APLUSTRUM DEBILE. *Apl. testâ obliquè ovatâ, parvâ, pellucidâ, corneâ, inflatâ, lævi, subumbilicatâ; spirâ distinctâ, planâ, anfractibus quatuor; columellâ subrectâ, anticè abruptè truncatâ; aperturâ amplâ, anticè dilatatâ.*

THE WEAK APLUSTRUM. Shell obliquely ovate, small, pellucid, horny, inflated, smooth, subumbilicated; spire distinct, flat, with four whorls; columella rather straight, anteriorly abruptly truncated; aperture wide, dilated in front.

GOULD, Silliman's Journal, vol. xxxviii. p. 196.

Hab. United States, America.

This and the first species are small, horny shells, which are not placed in the genus without hesitation; but as the earliest whorls are rather produced, and not sunk, as in *Hydatina*, they seem to come with a greater degree of propriety next to the "Admiral's Bulla."

MONOGRAPH

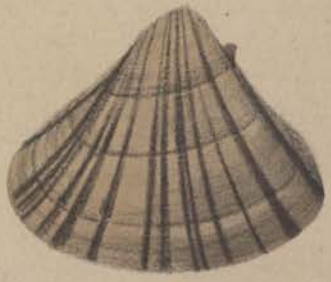
OF THE GENUS

GALATEA.

"And this our life, exempt from public haunt,
Finds tongues in trees, books in the running brooks."

1 a.

1 b.



1 c.

1 d.

Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp.

GALATEA.

PLATE I.

Genus GALATEA.

Testa fluviatilis, bimusculosa, subtrigona, crassa, lævigata, alba, plerumque radiis violaceis, aliquando violaceo maculata, rarius roseo variegata, epidermide crassâ olivaceâ lævigatâ induta; latere postico angulato; ligamento maximo super fulcrum callosum posito; margine cardinali crassissimo, dentibus magnis, plerumque laceratis, centralibus maximis, pallii impressio posticè sinuato.

Shell fluviatile, bimuscular, subtrigonal, thick, smooth, white, generally with violet rays, sometimes spotted with purple, more rarely variegated with pink, covered with a thick, olive, smooth epidermis; posterior side angular; ligament very large, placed on a callous fulcrum; hinge-margin very thick, teeth large, generally lacerated, the central ones very large, palleal impression sinuated posteriorly.

All the species, excepting the one named "*Tellina Ægyptiaca*," are inhabitants of the lakes and rivers of West Guinea, where the blacks resort to the Galateas, which they call "*Cokré*," for food in times of scarcity, although the animal is bad, both in taste and smell. Although the shell named *Fischieria Delessertii* is rather thin, and has a narrow hinge-margin and simple teeth, it seems hardly worth while to make a separate genus of it. The species of *Galatea* are difficult to distinguish from each other on account of their variations in growth, and the different form of the young shell, as compared with the adult specimen.

Species 1. (Mus. Sowerby.)

GALATEA RADIATA. *Gal. testâ elevatâ, dolabriformis, trigonâ, politâ, ponderosâ, intus albâ, purpureo radiatâ; cardine trigono, magno, lacerato, dente centrali valvulæ dextræ conico, ad apicem vix bifido, ad basin paulo divergenti; latere postico longiusculo, subacuminato, prope marginem angulato; margine dorsali valde declivi, excavato; margine ventrali ante angulum excavato, medio convexo; umbonibus perelevatis, acutis, angulatis.*

THE RADIATED GALATEA. Shell elevated, hatchet-shaped, trigonal, polished, heavy, white within, rayed with purple; hinge trigonal, large, lacerated, central tooth of right valve conical, scarcely bifid at the apex, a little divergent at the base; posterior side rather the longer, subacuminated, angular near the margin; dorsal margin much sloped, excavated; ventral margin excavated in front of the angle, convex in the centre; umboes much elevated, acute, angular.

LAMARCK, Anim. sans vert.

Venus hermaphrodita, Gmel.

Venus paradoxa,

Venus subviridis, Gmel.

Venus fluminea, Botten.

Potamophila radiata, Sowerby.

Hab. Rivers in Guinea between Sierra Leone and Cape Palma.

This shell is distinguishable from *Galatea concamerata* not only by the absence of the internal septum, but in the less elevated and triangular form of the shell, less rounded ventral margin, and greater prominence and angularity of the umboes. The shell, which I have described as *Galatea biangulata*, resembles it a little in general form, but is flatter, and has a double posterior angle and truncation.

September, 1868.

2 a.

3.

3.b.

2 b.

Sowerby del et lith.

Vincent Brooks Day & Son Imp.

GALATEA.

PLATE II.

Species 2. (Mus. Sowerby.)

GALATEA CONCAMERATA. *Gal. testâ ovali-subtrigonâ, subcompressâ, ponderosâ, regulari, lævigatâ, epidermide obscurissimè radiatâ, intus ad marginem cardinalem pallidè purpureâ, nonnunquam ad margines laterales et ventralem roseâ, anticè infra dentes lamellâ septiformi obliquâ concameratâ; dentibus crassis, in valvâ dextrâ uno centrali magno, diviso, divaricato; latere postico obtusè angulato, ante angulum leviter depresso, ad terminum arcuatim elevato; margine ventrali valde convexo; latere antico supernè leviter excavato; umbonibus subelevatis.*

THE CHAMBERED GALATEA. Shell ovato-subtrigonal, subcompressed, ponderous, regular, smooth, with the epidermis very obscurely rayed, pale purple within on the cardinal margin, sometimes rose-coloured on the lateral and ventral margins, anteriorly beneath the teeth formed into a chamber by an oblique septiform lamina; teeth thick, the central one in the right valve large, divided, and divergent; posterior side obtusely angular, slightly depressed before the angle, raised in a curve at the end; ventral margin very convex; anterior side slightly excavated above; umboes not much elevated.

DUVAL, Revue Zoologique, 1840, p. 211.

Hab. Rivers in Guinea.

Besides the concameration in the interior, this species differs from *Galatea radiata* in several respects. It is less trigonal, more oval, more flat, and has the ventral margin more rounded. The sides are more excavated, and the central tooth in the right valve is bifid.

Species 3. (Mus. —— ? copied.)

GALATEA TENUICULA: *Gal. testâ tenui, oblongo-subtrigonâ, lævigatâ; margine cardinali angusto; dentibus parvis, simplicibus; latere postico breviusculo, obtusè angulato; margine ventrali paulo convexâ; umbonibus latis, purpureis; latere antico supernè declivi.*

THE SMALL THIN GALATEA. Shell thin, oblong, subtrigonal, smooth; hinge-margin narrow; teeth small, simple; posterior side rather short, obtusely angular; ventral margin a little convex; umboes wide, purple; anterior side sloped above.

PHILIPPI, Zeitschr. für Mal. p. 191.

Hab. —— ?

Differing much in form from *Galatea Caillaudi.*

September, 1868.

1 a.

1 b.

1 c.

Sowerby, del et lith

Vincent Brooks, Day & Son, Imp.

GALATEA.

PLATE III.

Species 4. (Figs. *a*, *b*, *c*, *d*, Mus. Sowerby.)

GALATEA BERNARDI. *Gal. testâ trigonâ, ponderosâ, plerumque oblongâ, inæquilaterali, irregulari, concentricè subrugatâ, nodulis et rugis magnis undatâ, nonnunquam radiatâ, intus albo, purpureo et roseo variegato; latere postico elongatiusculo, biangulato, ante angulos depresso, angulo postico recto, antico noduloso, areâ postangulari subproductâ; margine cardinali lato; umbonibus supra marginem vix producto.*

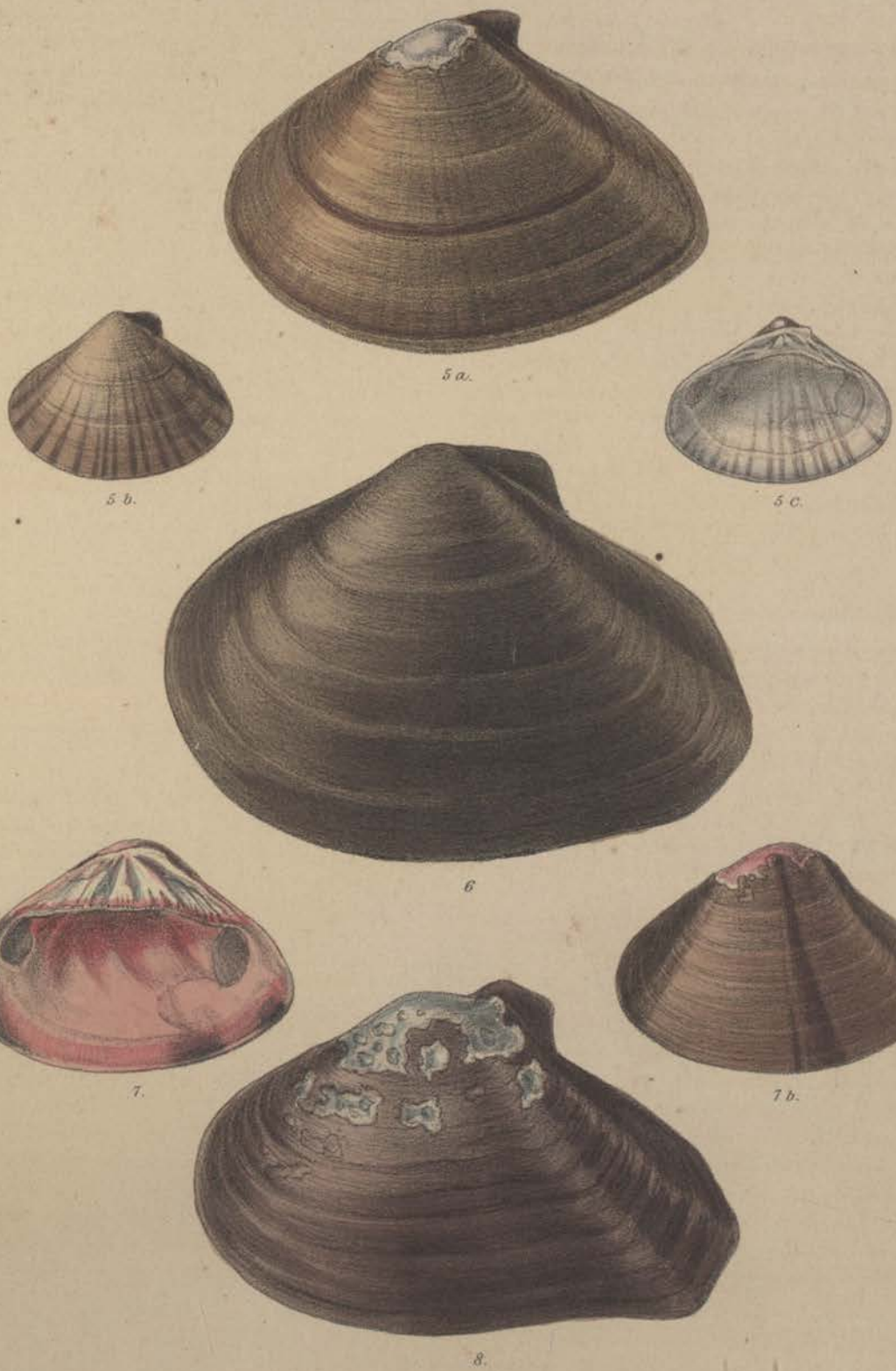
BERNARD'S GALATEA. Shell trigonal, heavy, generally oblong, inequilateral, irregular, concentrically rather rugose, undulated with nodules and large wrinkles, sometimes rayed, white within, variegated with purple and pink; posterior side rather elongated, biangular, depressed in front of the angles, posterior angle straight, anterior nodulose, postangular area rather produced; cardinal margin wide; umboes scarcely produced beyond the margin.

DUNKER, Journal de Conchyliologie, p. 338. pl. 12. f. 3. t. v. 1857.

Hab. Guinea, near Cape Lopez.

This irregularly-formed shell varies not only in the degree of rugosity, but also in its proportions and colours. I have not seen a specimen so rosy as the one copied from the late Chevalier Bernard's work, figs. 4 *c*, 4 *d*. The prevailing tints of the touches of colour near the margins about the muscular impressions in most varieties is purple. The extremely elevated form, figured in Plate V., Fig. 4 *e*, from a specimen now before me, is rare; and the very produced and radiated shell also in my hand is, as far as I know, unique.

September, 1868.



5 a.

5 b.

5 c.

6

7.

7 b.

8.

Sowerby, del. et. lith.

Vincent Brooks, Day & Son, Imp.

GALATEA.

PLATE IV.

Species 5. (Fig. *a*, *b*, *c*, Mus. Cuming.)

GALATEA KOCHII. *Gal. testâ ovato-subtrigonâ, lævigatâ, tenuiusculâ, plerumque radiatâ; latere postico obtusissimè angulato, ad terminum rotundato, ante angulum depresso; latere antico breviusculo; margine dorsali declivi; margine ventrali leviter concavo, ante angulum vix excavato; margine cardinali angustiusculo; dentibus disruptis; umbonibus moderatè prominentibus.*

KOCH'S GALATEA. Shell ovate-subtrigonal, smooth, rather thin, generally rayed; posterior side very obtusely angular, rounded at the end, depressed in front of the angles; anterior side rather shorter, with dorsal margin sloped; ventral margin slightly concave, scarcely excavated in front of the angle; cardinal margin rather narrow; teeth broken up; umboes moderately prominent.

BERNARDI, Monographie des Genres *Galatea* et *Fischieria*, p. 22. pl. iv. figs. 3, 4, 5, 6, 7, 8, et pl. 9, f. 6, 7.

Hab. Central Africa.

From the small rayed shell, figured by Bernardi as the type, I should have supposed this species to be founded on a young *Galatea radiata*; at the same time, the umboes are but little elevated, the hinge-margin narrow, the central tooth of the right valve very divergent, and the internal callosities wanting. The larger specimen in Mr. Cuming's collection is, on the other hand, very distinct and characteristic. This again differs from *Galatea Caillaudi* in the much less truncated form of the posterior.

Species 6. (Mus. —— ? copied.)

GALATEA CAILLAUDII. *Gal. testâ ovato-subtrigonâ, oblongâ, lævigatâ, tenui, intus albâ, pallidè cæruleo pictâ; margine cardinali angustatâ; dentibus centralibus obliquis; latere postico longiusculo, rotundatim angulato, ante angulum paulo excavato; margine dorsali recto, declivi; margine terminali obliquè truncato; latere antico supernè declivi; umbonibus haud prominentibus.*

CAILLAUD'S GALATEA. Shell ovately subtrigonal, oblong, smooth, thin, white within, faintly painted with purple; hinge-margin narrow, with central teeth oblique; posterior side rather long, roundly angular, a little excavated in front of the angle; dorsal margin straight, sloped, terminal margin obliquely truncated; anterior side sloped above; umboes not prominent.

BERNARDI, Mon. Gal. et Fisch. p. 43. pl. iv. f. 1, 2.

Hab. Africa.

Species 7. (Figs. *a*, *b*, Mus. Brit. and Sowerby.)

GALATEA HEUKELOMII. *Gal. testâ obtusè trigonâ, suboblongâ, lævigatâ, crassâ, fasciis unâ posticâ et unâ medianâ radiatâ, intus roseâ, ad margines et posticè purpureo variegatâ; latere postico breviusculo, obtusissimè angulato; latere antico angustato; margine dorsali declivi; margine cardinali lato; umbonibus gibbosis, depressis, obtusis.*

HEUKELOM'S GALATEA. Shell obtusely trigonal, rather lengthened, smooth, thick, rayed with a posterior and median band, rose-coloured within, varied with purple at the edges and posterior parts; posterior side rather short, very obtusely angular; anterior side narrow, with dorsal margin sloped; cardinal margin wide; umboes gibbous, depressed, obtuse.

BERNARDI, Monographie des Genres *Galatea* et *Fischieria*, p. 30. pl. vi. f. 3, 4.

This species approaches some varieties of *Galatea lata*, but the gibbosity of the umboes, and the comparative shortness of the posterior side may be considered sufficient to distinguish it.

Species 8. (Mus. Cuming in Brit.)

GALATEA CUMINGII. *Gal. testâ crassâ, oblongo-subtrigonâ, subventricosâ, concentricè subrugatâ, intus albâ; margine cardinali elongato, crasso, dente centrali valvulæ dextræ divaricato, ligamenti fulcro perelevato; latere postico producto, biangulato, ad terminum truncato, ante angulum depresso; margine ventrali ante angulum excavato; latere antico breviusculo.*

CUMING'S GALATEA. Shell thick, oblong-subtrigonal, subventricose, concentrically slightly wrinkled, white within; cardinal margin long, thick, with central

tooth of right valve diverging, ligamental fulcrum much elevated; posterior side produced, biangular, truncated at the end, depressed in front of the angle; ventral margin excavated in front of the angle; anterior side rather short.

Dunker in Bernardi's Monograph, p. 35. pl. vi. f. 7, 8.

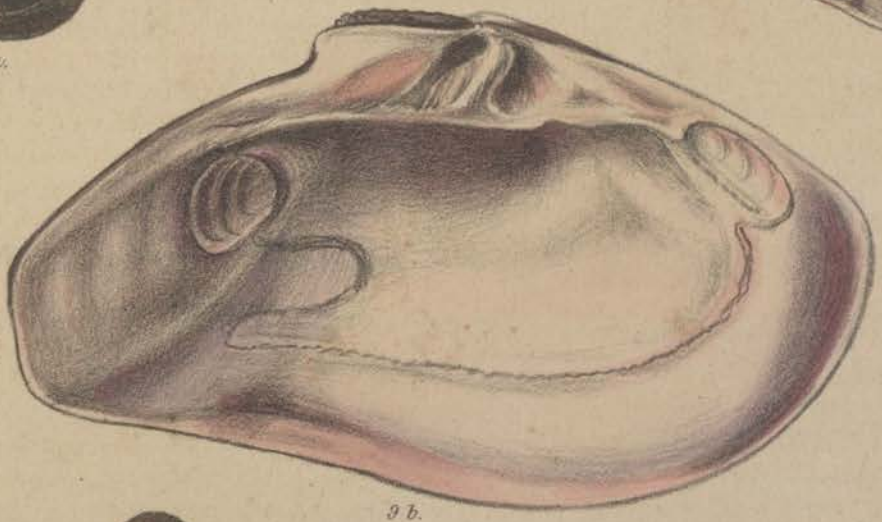
Hab. The Gaboon River.

This very produced, almost rostrated shell bears a near resemblance to *Galatea Bernardi*. In truth, some specimens in the Cumingian collection, named *Tellina Cumingii*, are nothing but elongated specimens of these species; but the shell figured by Bernardi differs in the teeth and some other respects.

9 a.

10 a.

10 b.



9 b.

12.

11.

Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp

GALATEA.

PLATE V.

Species 9. (Fig. *a*, *b*, Mus. Brit.)

GALATEA ÆGYPTIACA. *Gal. testâ oblongâ, compressâ, crassâ, lævigatâ, subæquilaterali, intus roseo et purpureo variegatâ; margine cardinali posticè crasso, anticè attenuato; dentibus lævigatis; latere postico obtusè angulato, ad terminum truncato; umbonibus valde depressis.*

THE EGYPTIAN GALATEA. Shell oblong, compressed, thick, smooth, subequilateral, variegated inside with pink and purple; hinge-margin thick posteriorly, attenuated anteriorly; teeth smooth; posterior side obtusely angular, truncated at the end; umboes much depressed.

CHEMNITZ, Conch. vol. xi. p. 234. f. 1985, 1986.
Galatea Chemnitzii, Philippi.
Hab. Egypt.

Only one valve of this shell has been found. It is in the collection of the late King of Denmark.

Species 10. (Fig. *a*, *b*, Mus. Cuming.)

GALATEA DELESSERTII. *Gal. testâ parvâ, tenui, trigonâ, radiatâ, lævigatâ, intus purpureo radiatâ; margine cardinali angusto; dentibus parvis, simplicibus; latere postico subtrigono, subrostrato; margine dorsali excavato; ventrali elevato, termino obliquè truncato; umbonibus elevatis; margine ventrali convexo.*

DELESSERT'S GALATEA. Shell small, thin, trigonal, rayed, smooth, rayed with purple within; cardinal margin narrow; teeth small, simple; posterior side subtrigonal, subrostrated; dorsal margin excavated; ventral elevated, end obliquely truncated; umboes elevated; ventral margin convex.

BERNARDI (genus *Fischieria*), Mon. Gal. et Fisch. p. 46. pl. 3. f. 3, 4.
Iphigenia ventricosa, Deshayes.
Hab. Watercourses near Cape Palmas.

However distinct as a species, this shell can scarcely be regarded as generically separable from the thinner forms among the *Galatea*.

Species 11. (Mus. —— ? copied.)

GALATEA BENGOENSIS. *Gal. testâ obtusè trigonâ, inæquilaterali, ponderosâ, concentricè striato-rugosâ, intus albâ; latere postico obscurè biangulato, subproducto, termino truncato; latere antico breviusculo; margine cardinali crasso; dentibus complexis.*

THE BENGO-RIVER GALATEA. Shell obtusely trigonal, inequilateral, ponderous, concentrically wrinkled and striated, white within; posterior side obscurely biangular, somewhat produced, end truncated; anterior side rather short; hinge-margin thick; teeth complex.

DUNKER, Guin. p. 31. t. ix. f. 28–30.
Hab. River Bengo.

It is a more obtuse and Cyrena-shaped shell than most of the species, and the anterior side is much the shorter.

Species 12. (Mus. Sowerby.)

GALATEA BIANGULATA. *Gal. testâ trigonâ, elevatâ, ponderosâ, lævigatâ, intus albâ, purpureo et roseo variegatâ; margine cardinali trigono, magno, dente centrali valvæ dextræ bifido, divaricato; latere postico subexcavato, validè biangulato, ad terminum truncato, antè angulos depresso; margine excavato; latere antico breviusculo, acuminatim rotundato, supernè excavato; umbonibus perelevatis, angulatis.*

THE BIANGULAR GALATEA. Shell trigonal, elevated, ponderous, smooth, white within, variegated with purple and rose; hinge-margin trigonal, large, with the central tooth of the right valve bifid and divergent; posterior side somewhat excavated, strongly biangular, truncated at the end, depressed in front of the angles, with the margin excavated; anterior side rather short, acuminately rounded, excavated above; umboes much elevated, angular.

SOWERBY.
Hab. —— ?

The elevation of the umboes and excavation of the sides give this shell the form of *Galatea radiata*, but it is a much flatter shell, and the distinct double angle and truncation of the posterior quite remove it. The first-mentioned characters again distinguish it from *Galatea læta*, with which otherwise it has relations, and to which it is similar in colouring. But the divided and widely divergent central tooth of the right valve clearly separates it from both species. Specimens of this species in the Cumingian collection are marked as *Galatea Bengoensis*, with which species they have no apparent connection.

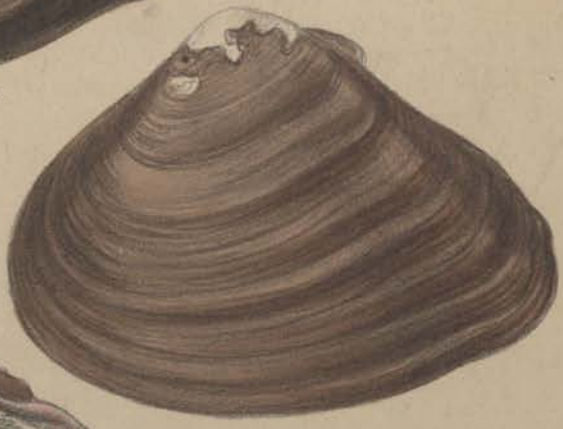
13.

14 a.

14.b.

14.c.

14 d.



14 e.

14 f.

Sowerby, del et lith.

Vincent Brooks, Day & Son, Imp.

GALATEA.

PLATE VI.

Species 13. (Mus. ——? copied.)

GALATEA LUBAKII. *Gal. testâ ovato-subtrigonâ, crassiusculâ, lævigatâ, intus albâ; latere postico leviter angulato prope marginem; margine declivi, convexo; latere antico breviusculo, subacuminato; umbonibus parvis, depressis, dente centrali valvulæ dextræ ad apicem diviso.*

LUBAK'S GALATEA. Shell ovato-subtrigonal, rather thick, smooth, white within; posterior side slightly angulated near the margin; margin sloped, convex; anterior side rather short, subacuminated; umboes small, depressed; central tooth of the right valve divided at the apex.

BERNARDI, Mon. Gal. et Fisch. p. 24. pl. 6. f. 5, 6.

Hab. ——?

Small umboes and convex posterior margin distinguish this species.

Species 14. (Fig. *a*, *b*, Mus. Cuming in Brit.)

GALATEA RUBICUNDA. *Gal. testâ oblongâ, crassâ, rubrâ, lævigatâ, lineis nigris paucis radiatâ; latere postico attenuato, obscurè angulato, ad terminum truncato; margine dorsali declivi; latere antico semiovato, supernè declivi; margine ventrali convexo; margine cardinali angusto.*

THE RUBICUND GALATEA. Shell oblong, thick, red, smooth, rayed with a few black lines; posterior side attenuated, obscurely angular, truncated at the end; dorsal margin sloped; anterior side semiovate, sloped above; ventral margin convex; hinge-margin narrow.

PHILIPPI, Zeitschr. für Mal. p. 190.

Hab. Guinea, near Loanda.

Much more elongated and ovate than *Galatea læta*, with much narrower hinge-margin. The two parts into which the centre tooth of the right valve is divided are close together, and appear like two oblique teeth nearly parallel.

Species 15. (Mus. Sowerby.)

GALATEA TRIANGULARIS. *Gal. testâ elevatâ, trigonâ, subæquilaterali, compressâ, ponderosâ, undulis magnis rugatâ, intus albâ, ad margines purpureo sparsim picto; margine cardinali trigono, crasso; latere postico obscurè biangulato, ad terminum truncato; umbonibus elevatis, marginibus dorsalibus valde declivibus; margine ventrali ante angulum excavato.*

THE TRIANGULAR GALATEA. Shell elevated, trigonal, subequilateral, compressed, ponderous, wrinkled with large waves, white within, sparsely painted near the margins with purple; hinge-margin trigonal, thick; posterior side obscurely biangular, truncated at the end; umboes elevated; dorsal margins much sloped; ventral margin excavated in front of the angle.

SOWERBY.

Hab. ——?

Notwithstanding the great variation which obtains in the form of specimens of the same species, it is difficult to admit one so wide as exists between this shell and the normal form of *Galatea Bernardi*. Except in an evidently distorted shell, I have seen no intermediate form in any collection.

Species 16. (Fig. *a*, *b*, Mus. Sowerby; Fig. *c*, Angas.)

GALATEA LÆTA. *Gal. testâ oblongo-subtrigonâ, solidâ, subcompressâ, leviter rugatâ, inter rugas lævigatâ, plerumque radiatâ, intus albâ, purpureo variegatâ; margine cardinali angustiusculo, dente centrali valvulæ dextræ bifido, haud latè divergenti; latere postico attenuato, obtusè biangulato, ante angulos depresso; margine dorsali declivi, prope angulum rotundo, supernè excavato, termino obtusè truncato; latere antico breviusculo, subacuminato; umbonibus gibbosis, obtusis, haud prominentibus.*

THE GLADSOME GALATEA. Shell oblong-subtrigonal, solid, subcompressed, slightly wrinkled, smooth between the wrinkles, generally rayed, white within, variegated with purple; cardinal margin rather narrow, with central tooth of right valve bifid, not widely divergent; posterior side rather attenuated, obtusely biangular, depressed in front of the angles; dorsal margin sloped, rounded near the angle; excavated above, obtusely truncated at the end; anterior side rather short, subacuminated; umboes gibbous, obtuse, not prominent.

PHILIPPI, Zeitschr. p. 190; Abbild. p. 123. pl. 1. f. 2.

Var. *Galatea versicolor*, Morelet, teste Adams.

Hab. Guinea, in a little river near Loanda.

The beautiful specimen of the variety *versicolor*, fig. *c*, is from the collection of G. F. Angas, Esq. *Galatea rubicunda* is certainly more oval, oblong, and straight, and differs in the characters of the teeth.

GALATEA.

	Plate.	Species.
Ægyptiaca, *Chemnitz*	V.	9
Bengoensis, *Dunker*	V.	11
Bernardi, *Dunker*	III.	4
biangulata, *Sowerby*	V.	12
Caillaudii, *Bernardi*	IV.	6
Chemnitzii, Philippi	V.	9
concamerata, *Duval*	II.	2
Cumingii, *Dunker*	IV.	8
Delessertii, *Bernardi*	V.	10
fluminea, Bolten	I.	1
Heukelomii, *Bernardi*	IV.	7
hermaphrodita, Gmelin	I.	1
Kochii, *Bernardi*	IV.	5
læta, *Philippi*	VI.	16
Lubakii, *Bernardi*	VI.	13
paradoxa, Gmelin	I.	1
radiata, *Lamarck*	I.	1
rubicunda, *Philippi*	VI.	14
subviridis, Gmelin	I.	1
tenuicola, *Philippi*	II.	3
triangularis, *Sowerby*	VI.	15
ventricosa, Deshayes	V.	10
versicolor, Morelet	VI.	16

MONOGRAPH

OF THE GENUS

AKERA.

"God's works I worship not, but Him,
And join with them in praise."

George Daniel.

1.a.

2.

3.

4.a.

5.

6.

4.b.

7.a.

7.b.

1.b.

Sowerby. del et lith.

Vincent Brooks Day & Son, Imp.

AKERA.

PLATE I.

Genus AKERA, *Müller*.

Testa convoluta, ovata vel subcylindracea, ventricosa, cornea, tenuis, resiliens; spira truncata, anfractibus distinctis, canaliculatis, ultimo ad suturam ab penultimo disjuncto; labium externum medio et suprà sinuatim productum; operculum nullum.

Shell convolute, ovate or subcylindrical, ventricose, horny, thin, elastic; spire truncated, with distinct channelled whorls, the last disjoined from the previous one at the suture; outer lip sinuously produced at and above the centre; no operculum.

The distinguishing character of the shells of this genus is the separation of the outer lip at the suture and horny elasticity of the general structure. The few species known frequent localities as far apart as Greenland in the north, and New Holland in the south. The typical species, *A. soluta*, is found at Zanzibar and in the Philippines.

Species 1. (Fig. *a*, *b*, Mus. Brit.)

AKERA SUBANGULATA. *Ak. testâ parvâ, tenui, lacteo-vitreâ, globoso-subquadratâ, ventricosâ, brevi, lævigatâ; spirâ parvâ, subacuminatâ, brevi, suturâ profundâ; ultimo anfractu supra et infra medium rotundatim angulato; aperturâ anticè expansâ, columellâ arcuatâ, tenui; labio externo supra medium sinuatim producto.*

THE SUBANGULAR AKERA. Shell small, thin, glassy white, nearly square, ventricose, short, smooth; spire small, slightly acuminated, short, with a deep suture; last whorl roundly angular above and below the middle; aperture expanded in front; columella arched, thin; outer lip sinuously produced above the middle.

MÖLLER, 'Index of Mollusca of Greenland,' p. 79.

Hab. Greenland.

A very small, white, subglobose shell of somewhat glassy texture.

Species 2. Mus.? (copied.)

AKERA TUMIDA. *Ak. testâ subcylindraceâ, rectiusculâ, medio fusco unifasciatâ; spirâ contractâ, planulatâ, anfractu ultimo superne tumido; aperturâ anticè subquadratâ, posticè contractâ; labio externo supra medium paulò producto; columella rectiusculâ, angustâ.*

THE TUMID AKERA. Shell subcylindrical, rather straight, with a single central band of brown; spire contracted, flat, with the last whorl tumid above; aperture rather square in front, contracted behind, with outer lip a little produced above the centre; columella rather straight, narrow.

A. ADAMS, Sowerby's Thesaurus Conchyliorum, Bulla, sp. 37, plate CXXV. f. 169.

Hab. Shores of New Zealand.

The whorls of this shell are more tumid than those of *Akera soluta* and *Ak. tenuis*.

Species 3. (Mus. MacAndrew.)

AKERA HANLEYI. *Ak. testâ parvâ, subobliquâ, inflatâ, tenuissimè striatâ, versus spiram attenuatâ; spirâ angustâ, planulatâ; aperturâ infra medium obliquè expansâ; columellâ paulò arcuatâ.*

HANLEY'S AKERA. Shell small, suboblique, inflated, very finely striated, attenuated towards the spire; spire narrow, flat; aperture obliquely expanded below the centre; columella a little arched.

A. ADAMS, Sowerby's Thesaurus Conchyliorum; Bulla, sp. 37. pl. CXXI. f. 46.

Hab. Zetland. Dredged by Mr. MacAndrew.

Very small and more oblique than the preceding species.

Species 4. (Fig. *a*, *b*, Mus. Brit.)

AKERA SOLUTA. *Ak. testâ cylindraceâ, ventricosâ, tenuiter striatâ; spirâ exsertâ, apice planulato, suturâ profundâ, planulatâ; labio externo longè retrorsum disjuncto, ad medium sinuatim producto; columellâ valde arcuatâ, solidâ.*

THE LOOSENED AKERA. Shell cylindrical, ventricose, finely striated; spire exserted, its apex flattened;

suture deep, flattened; outer lip separated far backwards, sinuously produced in the middle; columella much arched, solid.

CHEMNITZ, Hist. Conch. x. t. 46. f. 1359–61.

Bulla Ceylanica, Brug.

Bulla resiliens, Donovan.

Bulla flexilis, Brown.

Hab. Zanzibar (Theme); Philippines (Cuming).

Species 5. Mus. ? (Copied.)

AKERA BICINCTA. *Ak. testâ ovatâ, ventricosâ, tenuissimâ, albidâ, medio anfractuum bifasciatâ, concentricè et radiatim minutissimè striatâ; spirâ subrotundâ, supra labium elevatâ.*

THE TWO-BANDED AKERA. Shell ovate, ventricose, very thin, whitish, with two bands in the middle of the whorls, concentrically and radiately very minutely striated; spire rather rounded, elevated above the outer lip.

QUOY et GAIMARD, Voy. de l'Astrolabe, pl. 26. f. 31, 32.

Hab. New Holland.

With the general form of *Akera bullata*, this species is a little more rounded at the top, and is likewise distinguished by two brown bands.

Species 6. (Mus. Sowb.)

AKERA BULLATA. *Ak. testâ subovatâ, pellucidâ, lævi ventricosâ; labio longè retrorsum disjuncto, ad spiram elevato; aperturâ supernè angustatâ, spirâ angustâ, planulatâ.*

THE SWELLED AKERA. Shell subovate, pellucid, smooth, ventricose; outer lip separated far back, elevated at the spire; spire narrow, flat.

MÜLLER, Zoologia Danica.

Hab. Coast of Denmark.

Species 7. (Mus. Cuming.)

AKERA TENUIS. *Ak. testâ cylindraceâ, rectâ, angustâ, tenuissimè striatâ; apice elevato, planato, angusto; aperturâ posticè contractâ, anticè productâ.*

THE THIN AKERA. Shell subcylindrical, straight, narrow, very finely striated; spire raised, flat, narrow; aperture contracted posteriorly, produced anteriorly.

A. ADAMS, Sowerby's Thesaurus Conchyliorum, Bulla, sp. 36. pl. cxxxi. f. 45.

Hab. Rain's Island, Torres' Straits.

Narrower and more straightly cylindrical than *Akera soluta*.

MONOGRAPH

OF THE GENUS

DOLABELLA.

"There lives and works a soul in all things,
And that soul is God."—*Cowper.*

1.a.

2.a.

2.b.

1.b.

Sowerby, del et lith.

Vincent Brooks, Day & Son, Imp.

DOLABELLA.

PLATE I.

Genus DOLABELLA, *Lamarck.*

Testa marina, quam corpus suum multo minor, sub pallio cælata, calcarea, subspiralis, aperta, expansa, dolabriformis, ad dorsum epidermide corneâ, tenui, nitenti induta, ad apicem callo subspirali, super margines continuo et reflexo incrassata.

Shell marine, much smaller than its body, concealed under the mantle, calcareous, subspiral, open, expanded, hatchet-shaped, covered on the back with a horny, thin, shining epidermis, thickened at the apex with a subspiral callus, continued and reflected on the margins.

The *Dolabellæ* differ little from the *Aplysiæ*, excepting in the calcareous structure of their shell, which, like that of *Limax*, is concealed under the mantle, and is small as compared with the entire body. The apex of the shell is more spiral than in *Aplysia*, and its thick, half-spiral callus is remarkable. The *Dolabriferæ* are similar animals, having very small shells without any spiral tendency.

The habitats of the few known species are New Holland, Society Islands, the Indian and Red Seas.

Species 1. (Fig. *a*, *b*, Mus. Brit.)

DOLABELLA GIGAS. *Dol. testâ magnâ, oblongâ, convexâ, anticè rotundatâ, concentricè eleganter rugatâ; callo permagno, expanso, intus excavato, margine tenui; margine terminali rotundo.*

THE GIANT DOLABELLA. Shell large, oblong, convex, rounded in front, concentrically elegantly wrinkled; callus very large, expanded, excavated within, with thin edge; terminal margin rounded.

RANG (*Aplysia*), Hist. Nat. Aplys. p. 48. pl. 3. f. 4.

Hab. Indian Seas.

In Mr. Cuming's collection there are two specimens with expanded, cyathiform calli, which I take to be the young of this species. They are marked "Red Sea."

Species 2. (Fig. *a*, *b*, Mus. Brit.)

DOLABELLA ELONGATA. *Dol. testâ oblongâ, arcuatâ, valde attenuatâ, intus concentricè leviter rugatâ, radiatim subplicatâ, callo spiraliter plicato, tumido, super dorsum latè expanso, super margines latè usque ad terminum reflexo; margine terminali angulato; epidermide fusco-subaurantiâ.*

THE ELONGATED DOLABELLA. Shell oblong, arched, much attenuated, concentrically slightly wrinkled within, radiately subplicated, callus spirally plicated, tumid, widely expanded over the back, widely reflected upon the margins as far as the end; terminal margin angular, epidermis brown tending to orange.

SOWERBY.

Hab. Seychelles.

It is barely possible that this may be a monstrous example of *Dolabella Rumphii*. It presents, however, an appearance so extremely different, that it would hardly be just to leave it without a name.

October, 1868.

3.a.

4.

3.c.

5.

6.a.

6.b.

3.b.

Sowerby, del. et lith.

Vincent Brooks, Day & Son, Imp

DOLABELLA.

PLATE II.

Species 3. (Fig. *a*, *b*, *c*, Mus. Sowerby.)

DOLABELLA RUMPHII. *Dol. testâ subtrigonâ, breviusculâ, medio convexâ, anticè subangulatâ, lævigatâ; callo tumido, nodulifero, spiraliter subplicato, super dorsum expanso, super margines usque ad terminum reflexo et incrassato.*

RUMPHIUS'S DOLABELLA. Shell subtrigonal, rather short, middle convex, subangular in front, smooth; callus tumid, noduliferous, spirally subplicated, expanded over the back, reflected and thickened over the margins as far as the back.

CUVIER, Ann. du Mus. vol. v. pl. 29. f. 1.
Dolabella scapula (Mus. Brit.).
Doris verrucosa (Gmelin).
Limax marina (Rumphius).

The specimens of this shell exhibit some variations of character, but none of them are so much elongated, *i. e.* laterally or from the apical callus to the terminal edge or outer lip, as are the other species. The very young specimen represented (Fig. *b*) preserves the same character.

Species 4. (Mus. Paris.)

DOLABELLA ECAUDATA. *Dol. testâ tenui, obliquâ, oblongâ, planiusculâ, lævigatâ, angustâ; margine superiori breviusculo et rectiusculo, ad terminum obtusè angulato; callo subplanato, spiraliter leviter plicato, super dorsum paulo expanso; marginibus reflexis angustibus.*

THE TAILLESS DOLABELLA. Shell thin, oblique, oblong, rather flat, smooth, narrow; upper margin rather short, straight, obtusely angular at the end; callus rather flat, spirally slightly plicated, a little expanded over the back; reflected edges narrow.

RANG, Hist. Nat. des Aplys. pl. 2. f. 47.
Hab. Society Islands.

The shell is thinner and more obliquely elongated than *Dolabella Rumphii*. The animal has no caudal process, and in other respects differs from the last-mentioned species.

Species 5. (Mus. Paris.)

DOLABELLA TEREMIDI. *Dol. testâ tenuiusculâ, obliquè elongatâ, planiusculâ, versus apicem attenuatâ, vix arcuatâ; margine superiori breviusculo; margine inferiori elongato, leviter arcuato; callo planulato, subdepresso, tenui, expanso.*

TEREMID'S DOLABELLA. Shell rather thin, obliquely elongated, rather flat, attenuated towards the apex, not much curved; upper margin rather short; lower margin elongated, slightly arched; callus flattened, rather depressed, thin, expanded.

RANG, Hist. Nat. Aplys. p. 48, pl. 3. f. 1–3.
Hab. Society Islands.

The most lengthened of all the species, excepting *Dolabella elongata*. It is thin, with a rather patelliform callus.

Species 6. (Fig. *a*, *b*, Mus. Brit.)

DOLABELLA GUAYAQUILENSIS. *Dol. testâ parvâ, tenui, latâ, oblongâ, rectiusculâ, marginibus tenuibus; dorso striato; callo parvo, angusto, tumido, super margines haud continuis; epidermide pallidè griseâ.*

THE GUAYAQUIL DOLABELLA. Shell small, thin, wide, oblong, rather straight, with margins scarcely reflected; back striated; callus small, narrow, tumid, not continued upon the margins; epidermis pale grey.

PETIT, —— ?
Hab. Guayaquil.

A glance at the figure of the young *Dolabella Rumphii* will be sufficient to explain the difference between the two species, and to show that the small shells from Guayaquil are not the young of *D. Rumphii*.

Species not identified.

DOLABELLA FRAGILIS, *Lamarck*.

MONOGRAPH

OF THE GENUS

DOLABRIFERA.

"The Lord of all, Himself through all diffused,
Sustains and is the life of all that lives."

Cowper.

2.a.

1.a.

1.b.

2.b.

3.

4.a.

4.

5.a.

4.b.

5.b.

6.a.

6.b.

7.

Sowerby, del. et. lith.

Vincent Brooks, Day & Son, Imp.

DOLABRIFERA.

Genus DOLABRIFERA, *Gray*.

Animal marinum, trachelipodum.

Testa parva, sub tegmine animalis cælata, calcarea, epidermide tenui induta, dolabriformis, nucleo haud spirali.

Animal marine, trachelipodous.

Shell small, hidden under the skin of the animal, calcareous, covered with a thin epidermis, hatchet-shaped, nucleus not spiral.

The non-spiral nucleus and the squareness and straightness of general form distinguish this genus from *Dolabella*. The animals of *Dolabella*, *Dolabrifera*, and *Aplysia* are generically the same.

Few species, and those rarely, are to be seen in collections. The West India Islands and several of the Pacific groups produce them sparingly.

Species 1. (Fig. *a*, *b*, Mus. Brit.)

DOLABRIFERA VITRÆA. *Dol. testâ parvâ, tenui, vitræâ, pellucidâ, angustâ; rostro brevi, latiusculo, apice incurvo, crasso; margine basali subarcuato, margine externo subrotundo.*

Shell small, thin, glassy, pellucid, narrow; rostrum short, rather wide, apex incurved, thick; basal margin slightly arched, outer margin a little rounded.

SOWERBY.

Hab. "Narai," Fiji Islands.

The smallest of the known species; it is thin and glassy.

Species 2. (Fig. *a*, *b*, Mus. Brit.)

DOLABRIFERA SOWERBYI. *Dol. testâ tortuâ, subtrigonâ; rostro tortuo, retrorso, producto, apice parvo; margine basali rectiusculo, margine superiori concavo, margine externo infra medium sinuato, termino rotundatim acuminato; disco ad dorsum medio depresso.*

SOWERBY'S DOLABRIFERA. Shell tortuous, subtrigonal, beak tortuous, thrown backwards, produced, apex small; basal margin rather straight, upper margin concave, external margin sinuated below the middle, roundly acuminated at the end; disk centrally depressed at the back.

GUILDING, Zool. Journ.

Hab. St. Vincent's, W. I.

The tortuous depression in the dorsal disk, and the acuminate termination of the outer margin distinguish this species.

Species 3. (Mus. Brit.)

DOLABRIFERA PACIFICA. *Dol. testâ tenui, rectâ, oblongâ; rostro lato, apice incurvo, leviter incrassato; margine basali elongato, rectiusculo; margine terminali rotundatim angulato; margine externo medio subsinuato.*

THE PACIFIC DOLABRIFERA. Shell thin, straight, oblong; beak wide, apex incurved, slightly thickened; basal margin elongated, rather straight; terminal margin roundly angular; outer margin subsinuous in the middle.

PEASE.

Hab. Islands in the Pacific.

Species 4. (Fig. *a*, *b*, Mus. —— ? copied.)

DOLABRIFERA CUVIERI. *Dol. testâ solidâ, subquadratâ, canalibus indistinctis radiantibus duobus medianis impressâ; rostro producto, trigono, apice crasso, retrorso, quadrato; marginibus externo et terminali sinuatis, termino rotundatim acuminato; occurrit varietas testâ elongatâ, attenuatâ.*

CUVIER'S DOLABRIFERA. Shell solid, squarish, impressed with two medial, indistinct, radiating canals; beak produced, trigonal, with thick, back-turned, square apex; external and terminal margins sinuated, end roundly acuminated; a variety occurs with shell elongated, attenuated.

H. AND A. ADAMS, Genera of Shells.

Aplysia dolabrifera, Cuvier.

Hab. Island of Bourbon.

Our figure of the normal form (*a*) is taken from Mr. Adams's work, that of the attenuated shell from Rang's work on 'Aplysiæ,' where also a much-distorted shell, still preserving the rather straight, square character of the species is figured.

Species 5. (Fig. *a*, *b*, Mus. Brit.)

DOLABRIFERA MARMOREA. *Dol. testâ brevi, subquadratâ, incrassatâ, rectâ; rostro breviusculo, lato, crasso, apice*

incurvo, calloso; margine basali recto; margine superiori excavato; marginibus externo et terminali subcontractis.

THE MARBLED DOLABRIFERA. Shell short, subquadrate, thickened, straight; beak rather short, wide, thick, with incurved, callous apex; basal margin straight; upper margin excavated; external and terminal margins a little contracted.

PEASE.

Hab. Sandwich Islands.

Two specimens of the species here described are labelled as above in the late Cumingian collection. The name is probably derived from the colouring of the animal.

Species 6. (Fig. *a*, Mus. Brit.; *b*, copied.)

DOLABRIFERA ASCIFERA. *Dol. testâ quadrato-subtrigonâ, oblongâ, crassâ, irregulari, tortuâ; rostro retrorso, brevi, trigono; apice calloso, lobato; margine basali paulo convexo; margine externo medio subcontracto.*

THE HATCHET-BEARING DOLABRIFERA. Shell squarish-subtrigonal, oblong, thick, irregular, tortuous; beak thrown backwards, short, trigonal; apex callous, lobed; basal margin a little convex; external margin a little contracted in the middle.

RANG, Hist. Nat. des Aplysiens.

Hab. ——?

Species 7. (Mus. Brit.)

DOLABRIFERA OLIVACEA. *Dol. testâ angustâ, rectâ, oblongâ, medio radiatim depresso; marginibus rectis, quadratis; rostro producto, trigono; apice calloso, bilobato.*

THE OLIVACEOUS DOLABRIFERA. Shell narrow, straight, oblong, radiately depressed in the middle; margins straight, square; beak produced, trigonal; apex callous, bilobed.

PEASE.

Hab. Sandwich Islands.

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